



City of Maple Valley Comprehensive Plan

June 2015





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INTRODUCTION

Maple Valley has undergone tremendous growth and change since its incorporation in 1997. Since 2000, the City has grown from a population of 14,200 to approximately 24,500 residents in 2014.

In response to the requirements of the Washington State Growth Management Act (GMA) (RCW 36.70A), the City adopted its first Comprehensive Plan in 1999. This update builds off of the 2005 Comprehensive Plan update, and responds to the Growth Management Act (GMA) requirement for periodic review. It also conforms to Countywide Planning Policies (CPPs), and is based on Framework Goals created through the planning process.

This 20-year Comprehensive Plan is a vehicle for Maple Valley to logically organize and prioritize the community's needs to maintain a healthy, dynamic and balanced community. City residents and businesses, the Planning Commission, staff and consultants, have worked together during the past year to produce this Plan. It is a commitment to meeting the needs of the greatest number of residents in the City, and to preserving the community's natural beauty and unique character. The creation of this document is based on a comprehensive and inclusive public involvement process, which has led to the creation of a vision, the identification and evaluation of existing conditions, a review of alternative solutions to problems, and the selection of a preferred direction for the City.

COMPREHENSIVE GROWTH MANAGEMENT PLANNING

What is a Comprehensive Plan?

A Comprehensive Plan is a policy statement adopted by the City to guide decisions affecting the community's physical development. A Comprehensive Plan indicates how the City envisions the community's future, and sets forth strategies for achieving the desired community. A Plan generally has three characteristics. First, it is comprehensive – the Plan encompasses all the geographic and functional elements which have a bearing on the community's physical development. Second, it is general – the Plan summarizes the major policies and proposals of the City, but does not usually indicate specific locations or establish detailed regulations. Third, it is long-range – the Plan looks beyond current issues and matters confronting the community, to the community's future. Although the planning time frame for this Plan is 20 years, many of its policies and actions will affect the City of Maple Valley well into the future.

Why is a Comprehensive Plan Needed?

The State of Washington adopted the Growth Management Act (GMA) in 1990. This legislation requires Comprehensive Plans to include specific elements; obligates cities to adopt implementing regulations, and counties to develop Countywide Planning Policies (CPPs) to address issues of a regional nature; and establishes protocols and deadlines for these tasks.

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The GMA establishes 14 statutory goals that guide the development of Comprehensive Plans. For a plan to be valid, it must be consistent with these goals and the specific requirements of the Act. Consistency, in this context, means that a Plan must not conflict with the state statutory goals, CPPs, or Plans of adjacent jurisdictions. The fourteen statutory goals identified in the state legislation are summarized as follows:

- 1) Guide urban growth to areas where urban services can be adequately provided;
- 2) Reduce urban sprawl;
- 3) Encourage efficient multi-modal transportation systems;
- 4) Encourage the availability of affordable housing to all economic segments of the population;
- 5) Encourage economic development throughout the state;
- 6) Assure private property is not taken for public use without just compensation;
- 7) Encourage predictable and timely permit processing;
- 8) Maintain and enhance natural resource-based industries;
- 9) Encourage retention of open space and development of recreational opportunities;
- 10) Protect the environment and enhance the state's quality of life;
- 11) Encourage the participation of citizens in the planning process;
- 12) Ensure adequate public facilities and services necessary to support development;
- 13) Identify and preserve lands and sites of historic and archaeological significance; and
- 14) Manage shorelines of statewide significance.

Relationship to the Countywide Planning Policies and Vision 2040

The Countywide Planning Policies (CPPs) were developed and ratified by King County and the cities in 1994. They are, in essence, a set of common policies and procedures that all jurisdictions in King County have agreed to address growth management in a coordinated manner. Taken together, the CPPs try to balance issues related to growth, economics, land use, and the environment. The specific objectives include:

- Implementation of Urban Growth Areas.
- Promotion of contiguous and orderly development.
- Siting of public capital facilities.
- Establishing transportation facilities and strategies.
- Creating affordable housing plans and criteria.
- Ensuring favorable employment and economic conditions in the county.

In addition, Maple Valley's Comprehensive Plan is guided by the multi-county policies of Vision 2040, the regional plan developed by the Puget Sound Regional Council (PSRC). Vision 2040 is an integrated, long-range vision for maintaining a healthy region promoting the well-being of people and communities, economic vitality, and a healthy environment. It contains an environmental framework, a numeric regional growth strategy, policy framework guided by overarching goals, implementation actions, and measurements to monitor progress.

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PLAN SUMMARY

Organization of the Comprehensive Plan

The Maple Valley Comprehensive Plan is comprised of the following sections:

- Executive Summary: This section includes a description of the comprehensive planning process.
- Vision: Includes the community profile, a brief history of Maple Valley, discussion of the opportunities and challenges, the Community Vision, and Framework Goals.
- Community Plan Elements: This section includes Goals and Policies and Support Analysis for each element. The Support Analysis provides the foundation for the goals and policies, and includes inventories of background data, needs assessments or analyses, and identification of issues. The elements are organized as follows:
 - Economic Development
 - Land Use
 - Housing
 - Transportation
 - Parks & Recreation
 - Environmental Quality
 - Capital Facilities
 - Utilities
- Appendices -
 - List of Maps
 - Appendix A – Capital Facilities
 - Appendix B – Tahoma School District
 - Appendix C – Maple Valley Fire & Life Safety

Plan Implementation

The Growth Management Act (GMA) requires that land use regulations and functional plans must be consistent with and implement the Comprehensive Plan. Consequently, once the Plan is adopted, the City will amend its development regulations to ensure consistency with the Plan. Development regulations should also be revisited within six months of the adoption of any Plan amendments.

Policy Determination

In developing a Comprehensive Plan, the Planning Commission and the City Council set forth a coherent set of policies. This process has two functions. First, it encourages City officials to look at the big picture and step away from current issues and matters to develop overriding policy goals for their community. Second, it allows the City Council to make explicit the policies that are guiding their decisions so that those policies may be viewed critically and subjected to open and democratic

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review. The Plan serves to focus, direct, and coordinate the efforts of the departments within city government by providing a general comprehensive statement of the City's policies and goals.

Policy Implementation

A community can move more effectively toward its goals and implement its policies after they have been agreed to and formalized through the adoption of a Comprehensive Plan. The Comprehensive Plan is a basic source of reference for officials as they consider the enactment of ordinances or regulations affecting the community's physical development (e.g., a zoning ordinance or a particular rezone), and when they make decisions pertaining to public facility investments (e.g., capital improvement programming or construction of a specific public facility). This process ensures that the community's overall goals and policies are implemented.

The Plan also provides a practical guide for City officials as they administer City ordinances and programs. This ensures that the day-to-day decisions of City staff are consistent with the overall policy direction established by the City's legislative body.

Communication/Education

The Comprehensive Plan communicates to the public and to City staff the policy of the City Council. This allows the staff, the public, private developers, business people, financial institutions, and other interested parties to anticipate what the decisions of the City are likely to be on any particular issue. As such, the Plan provides predictability. Everyone is better able to plan activities knowing the probable response to their proposals and to protect investments made on the basis of policy. In addition, the Comprehensive Plan educates the public, the business community, the staff, and the City Council itself on the workings, conditions, and issues within their City. This can stimulate interest in community affairs and increase citizen participation in government.

PLAN AMENDMENTS

For the Plan to function as an effective decision making document, it must be flexible enough to accommodate changes in public attitudes, developmental technologies, economic forces, and legislative policy, yet be focused enough to ensure consistent application of development principles. The Growth Management Act requires that the Comprehensive Plan be amended no more than once a calendar year. All of the proposed amendments submitted during the year by the City Planning Commission and City Council should be considered concurrently to determine the cumulative effect of the proposals.

Annual Plan Amendment Process

The Annual Plan Amendment Process provides an opportunity to refine and update the Comprehensive Plan and to monitor and evaluate the progress of the implementation strategies and policies incorporated therein. The process is also developed to meet the requirements of the GMA. RCW 36.70A.130 addresses Comprehensive Plan amendments. The GMA requires that

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Comprehensive Plans be amended only once a year, except for certain exemptions and “emergencies.” Under the law, the following amendments may be considered more frequently than once every year:

- Initial adoption of a subarea or neighborhood plan.
- Adoption or amendment to a shoreline management program.
- When an emergency exists (“emergency” is not defined).
- To resolve an appeal of a Comprehensive Plan filed with a growth management hearings board or with the court.

The major requirements of the GMA regarding plan amendments are described below:

- Establish a means by which cities and counties will “docket” (i.e., compile and maintain a list) suggested plan or development regulation amendments and consider them during the annual amendment process.
- Cities and counties must include in their development regulations a procedure for any interested person to suggest Comprehensive Plan or development regulation amendments.
- Public participation programs must be developed for proposed amendments or revisions to the Comprehensive Plan.

This process is the vehicle by which the City, private property owners, developers, community groups or individual citizens request changes to the planned land uses on property or propose changes to the goals and policies of the Plan. The process includes the review of proposed expansions to the Urban Growth Area (UGA) thus allowing the City to evaluate the necessity for further urban expansion and growth. The process affords the opportunity to refine the Plan based on changing conditions and community needs.

The following policies reflect the annual Plan review and amendment process:

- I-P1** The City shall schedule annual review of the Comprehensive Plan to allow for docketing of Plan amendment requests and to consider the need for amendments. At that time, City-initiated and private party or developer-initiated amendment requests will be considered.
- I-P2** All Comprehensive Plan amendments shall be processed together with any necessary zoning, subdivision or other ordinance amendment, to ensure consistency.
- I-P3** Amendment procedures shall be fully outlined in the City of Maple Valley land development regulations.

All amendment proposals shall be considered concurrently (in a package) first by the Planning Commission and then by the City Council so that their cumulative impacts can be ascertained. Provisions for the joint City/County consideration of Plan amendments of mutual concern within the Urban Growth Area shall be included in the appropriate interlocal planning agreement (as established in the Countywide Planning Policies), or other appropriate agreement.

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Emergency Plan Amendment Consideration

The Comprehensive Plan may be amended outside the normal schedule if findings are adopted (by City Council resolution) to show that the amendment was necessary due to an emergency situation of neighborhood or Citywide significance. Plan and zoning amendments related to annexations may be considered during the normal annexation process and need not necessarily be coordinated with the annual Plan amendment schedule. The nature of the emergency shall be explained to the City Council, which shall decide whether or not to allow the proposal to proceed ahead of the normal amendment schedule.



VISION
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VISION

COMMUNITY HISTORY

Understanding a community's history is critical to effectively plan for its future. Historic patterns of development and community events provide a basis upon which to plan. This section provides a brief overview of Maple Valley's past. Additional information about the community's history can be obtained by contacting the Maple Valley Historical Society.

The City is located approximately 10 miles southeast of Renton and 20 miles southeast of Seattle, in the foothills of the Cascade Range. Historically, the area has been recognized as a community of abundant natural resources. Early residents were rooted in resource-based economies such as mining, logging, and farming. The area was most known for its abundance of coal, which essentially fueled the development of Seattle for many decades. Also, the first hydroelectric development in the country was built in the Cedar River watershed, a watershed which itself was likely the largest forest area ever owned by any city in the United States.¹

Duwamish Indians

Prior to the settlement of Europeans, Duwamish Indians inhabited southeast King County. The village located in Maple Valley was *Duwe'kwulsh*.² The Cedar River, which borders the northeastern edge of the City, played a central role in Duwamish culture. It was the easiest and shortest route across the Cascades for Puget Sound and Eastern Washington Indians, and eventually for traders and prospectors. The Cedar River was also the primary fishing territory for the Duwamish.

European Settlement³

Homesteaders arrived in Maple Valley in 1876 and began clearing land by ax and bucksaw. The first non-Indian family to settle the Maple Valley area was the Maxwells. In 1879, George Ames arrived and claimed land on the present Hobart Road and was soon joined by his brother-in-law C.O. Russell and later Henry Sidebotham. These three men named the area *Vine Maple Valley*, which the U.S. Post Office later shortened to *Maple Valley*.

In 1885, the Columbia and Puget Sound Railroad built a line through Maple Valley to Black Diamond and the coal mines. This brought settlers to the area in larger numbers. Residents not employed at the mines engaged in logging, farming, dairying and raising poultry.

Historic Landmarks⁴

Coal mining at the base of Cedar Mountain began in 1884. The first mine produced large amounts of bituminous coal for 24 years. A mining camp was built in the valley below the mine. Today, the old

¹ Slauson, Morda. *One Hundred Years Along the Cedar River*. Slauson, 1971.

² Maple Valley Historical Society Map with watershed history.

³ Barbara Nilson, Maple Valley Historical Society, July, 1998.

⁴ Barbara Nilson, Maple Valley Historical Society, July, 1998.



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mine offices on Maple Valley Highway (SR 169) are historical landmarks. Mrs. McDonald opened the first store on Maxwell Road, but sold it shortly to W.D. Gibbon in 1891. The Gibbon's store, and house next door, had to be moved in 1907 when they were found to be in the path of the new Chicago, Milwaukee and St. Paul Railroad. The house is still in existence one block off the Maple Valley Highway (SR 169), and is used as an office today. The Gibbons Store was designated as a historical landmark by the City in 1998 and relocated to the Maple Valley Community Center Campus in 1999. In 1905, Mr. and Mrs. Olaf Olson purchased 80 acres on 216th and built an unusual four-story solid concrete home with 2,200 square feet on each floor and a tunnel-shaped barn. Both are King County and City recognized historical landmarks and are now part of New Community Church.

In 1910, a site north of the village was selected by Maple Valley citizens to build a two-story wooden structure to serve as both a grade school and high school. Parents donated time and equipment to level the site and to prepare the building. It is still standing, but scheduled for demolition. In 1920, a three-story brick school house was built on the same site. The top floor is now the location of the Maple Valley Historical Society's museum, a King County historical landmark. The first school established in Maple Valley proper was held in a log cabin near the Hobart Cemetery. In 1940, the site was dedicated with a monument inscribed with the names of the teachers, and a vault containing souvenirs, pictures, report cards, and a list of those pioneers present at the dedication.

Two King County historic landmarks exist inside the City limits: 1) the Fire Engine Museum; and 2) Lake Wilderness Lodge. The museum was built by volunteers, coordinated through the Maple Valley Historical Society, to house the community's first fire engine. Lake Wilderness Lodge is a relic of Maple Valley's past era as a resort community. The lodge was run by the Gaffney family for 60 years, when Lake Wilderness was a popular weekend and summer recreation destination for Seattle residents.

Recent History

After the mining and logging boom of the late 19th and early 20th centuries, Maple Valley grew slowly as a rural agricultural community. Maple Valley was considered a rural and country resort community up until the 1970s when it began to accommodate an increasing amount of growth. Improvements to the area's major roads and highways opened the area up to new residents who could commute to work in nearby cities and employment centers.

The type of rural atmosphere that characterized Maple Valley — single homes on large tracts of forest, grassland or pasture land — was quickly being replaced by urban subdivisions and planned developments, which now cover much of the City. Between 1990 and 2014, the overall population of the area increased from 6,660 to 24,240, and it was transformed from a rural area to an urban growth area.

In 2007, King County proposed an amendment, through the 2008 King County Comprehensive Plan update, that would change their rural designated property to an urban designation. This property is identified by King County as the "Summit Pit Property". The property, now known as "Summit Place"



VISION

was annexed into the City of Maple Valley in 2013 and currently has a land use designation of Master Planned Community.

VISION FOR THE FUTURE

Maple Valley's Vision of its desired future is rooted in the community's values and priorities. It considers recent and projected trends, builds on the City's assets and opportunities, and recognizes the importance of a fiscally sustainable city government to protect and promote Maple Valley's quality of life. The Vision Framework Goals (VFGs) and policies (VFPs) provide high-level direction to shape the community's future, and are carried forward in the provisions of the elements of the Comprehensive Plan.

Vision – Maple Valley 2035

Maple Valley will work as a community to provide a safe, aesthetically pleasing city that operates in harmony with its natural environment, rural history, and provides multi-generational opportunities for economic growth, community involvement, recreational activities, and cultural expression. Our city will be a regional focus for health, business, good government, and education, and will provide opportunities for regular interaction in all spheres of human endeavor with our neighbor communities and visitors from outside our region. We will make this possible with a vital economic base, a multi-faceted transportation network, and an emphasis on the quality of life for our residents.

Vision Framework Goals (VFG) and Policies (VFP)

Goal VFG-1: Promote economic vitality, job creation, and local access to goods and services.

- Policies:**
- VFP-1.1** Development and redevelopment in the North and South Activity Centers are the primary means and optimal locations for achieving this Framework Goal. The City should review and revise, as necessary, its development regulations to make the permit process in these centers as timely, fair, flexible, and predictable as possible.
 - VFP-1.2** The City should pursue an aggressive economic development strategy, including public/private partnerships and targeted capital investments to create incentives for development and redevelopment in the North and South Activity Centers as well as the Legacy property.
 - VFP-1.3** Focus new jobs-based commercial, retail and service uses in the Activity Centers throughout the City.
 - VFP-1.4** While the Activity Centers are the main focus, the City should also be open to opportunities to facilitate development and redevelopment in commercial districts outside of the Centers.



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VFP-1.5 Develop a business retention and expansion program and support efforts that foster small business development and entrepreneurship.

VFP-1.6 Build and promote existing and new relationships with workforce development organizations, training providers and educational institutions to strengthen the City's workforce pipeline and its reputation for skilled workers.

Goal VFG-2: Create a fiscally sustainable city government.

Policies: **VFP-2.1** Develop and promote an organizational culture within City Hall that is oriented to economic development in City services and communicate that priority to residents and externally.

VFP-2.2 Utilize an approach to land use, transportation and infrastructure development that promotes the generation of family-wage jobs and diversifies the City's revenue base.

VFP-2.3 Attract family-wage employers to the City in order to diversify the City's revenue base, provide employment opportunities for Maple Valley residents, and increase the City's daytime population.

Goal VFG-3: Promote Maple Valley as a multi-generational community.

Policies: **VFP-3.1** Increase the range of housing choices in Maple Valley for families, young singles, and seniors.

VFP-3.2 Improve mobility choices for all members of the community.

VFP-3.3 Protect and enhance the character of existing single-family neighborhoods.

VFP-3.4 Grow multi-family housing opportunities in mixed-use districts and corridors.

VFP-3.5 The City should consider incentives to provide a greater variety of housing options for all members of the community.

Goal VFG-4: Celebrate Maple Valley's place in the region.

Policies: **VFP-4.1** Promote Maple Valley as the economic center of the Greater Maple Valley primary market area.

VFP-4.2 Promote Maple Valley as a "destination" for users of the regional trails network in southeast King County.

VFP-4.3 Strengthen the visual and functional edge between Maple Valley and the unincorporated rural and resource lands that surround it.

VFP-4.4 Encourage and maintain partnerships with county government, other jurisdictions, the Tahoma School District, the Maple Valley Black Diamond Chamber of Commerce and economic development associations to give Maple Valley a voice in regional decisions.



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Goal VFG-5: Create a Catalyst for Economic Development and Civic Expression on the Legacy property.

- Policies:**
- VFP-5.1** Create a primary gathering place that is a focal point, a civic center, and a meeting place for the whole Maple Valley community. Additionally, enhance the identity of the City of Maple Valley and distinguish the image of the City within the Puget Sound region.
 - VFP-5.2** Include commercial, retail, and other uses to develop mutually beneficial relationships that enhance and support adjacent, on-site public uses. Additionally, consider uses that generate revenue for the City of Maple Valley or that stimulate appropriate private development on adjacent property.
 - VFP-5.3** Provide bicycle and pedestrian connections to nearby natural areas and public uses as well as to adjacent residential and activity centers.
 - VFP-5.4** Use investments in public facilities as a catalyst to private investment on the Legacy Property.

Goal VFG-6: Increase multi-modal mobility options within Maple Valley and connections to the greater region.

- Policies:**
- VFP-6.1** Provide for a safe transportation network that is well maintained, accessible, and enhances traffic flow and safe mobility for motorists, cyclists, and pedestrians alike.
 - VFP-6.2** Partner with Metro, other jurisdictions, and major employers to improve transit options into Maple Valley on SR 169, SR 18 and SR 516.

Goal VFG-7: Provide a physical environment that enables residents to incorporate physical activity into their daily lives.

- Policies:**
- VFP-7.1** Design, develop, and enhance parks, trails, open spaces, and recreational facilities.
 - VFP-7.2** Design new mixed-use and multi-family projects to maximize pedestrian and bicycle access and amenities onsite and connectivity to nearby sites, walkways, and trails.

Goal VFG-8: Promote context-appropriate physical form and character to create a sense of place.

- Policies:**
- VFP-8.1** Maintain the low-rise feel of the City's established single-family neighborhoods.
 - VFP-8.2** Encourage building heights up to five stories to accommodate new mixed-use and multi-family development in centers and along arterial corridors.



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- VFP-8.3** Adopt development regulations and standards that enable a transition over time, allowing long-standing uses to continue until the market justifies conversion to more dense or intense land uses.

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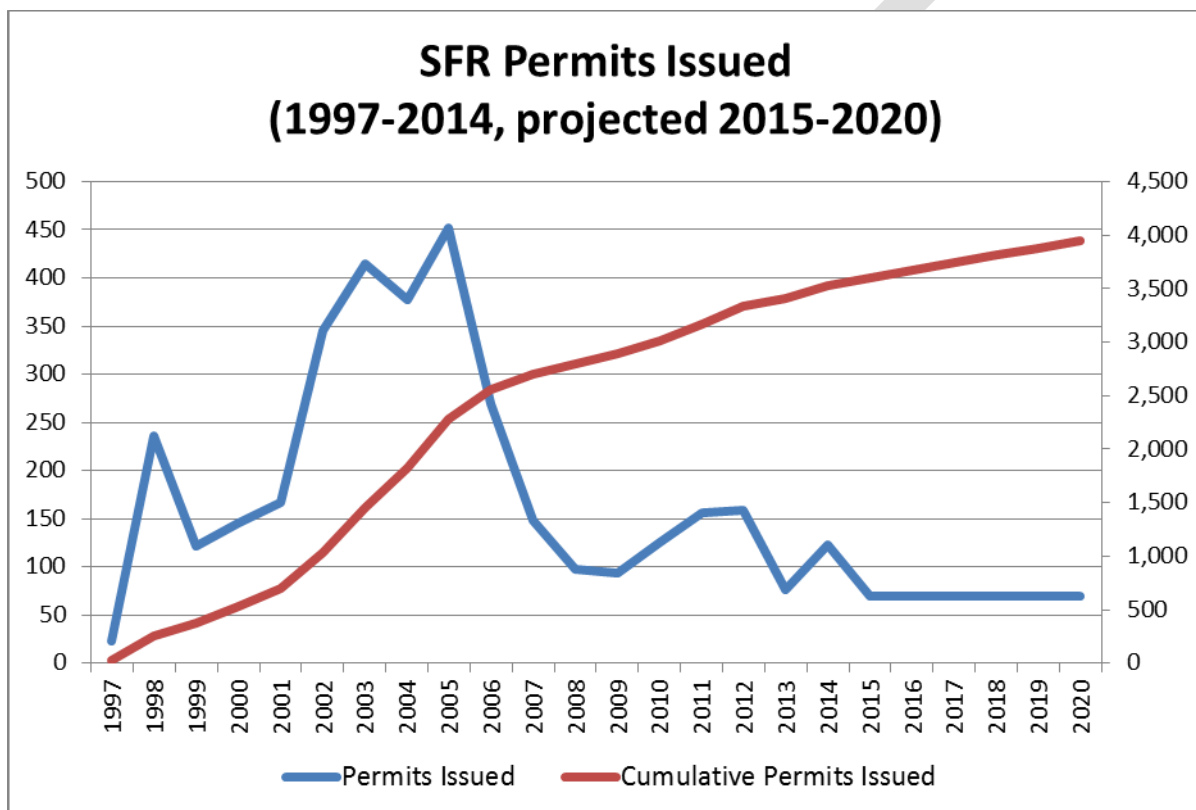


ECONOMIC DEVELOPMENT

Support Analysis

THE NEED FOR ECONOMIC SUSTAINABILITY

In the formative years of Maple Valley, growth in revenue and expansion of services offered by the City was driven by residential development. During the first ten years of the City's existence, 2,700 single-family residential (SFR) permits were issued at an average of 245 per year. Since that time the City averaged less than 100 permits per year and anticipates approximately 70 permits to be issued annually going forward.



The rapid growth and associated revenue generated contributed to the expansion of revenue for the City as well as growth in the cash reserves the City maintains. The General Fund budget grew from \$2.6 million in 1998 to \$11.2 million in 2014. The City added, over that time, a Parks & Recreation Department with active and passive recreation, as well as increased the number of police officers in Maple Valley.

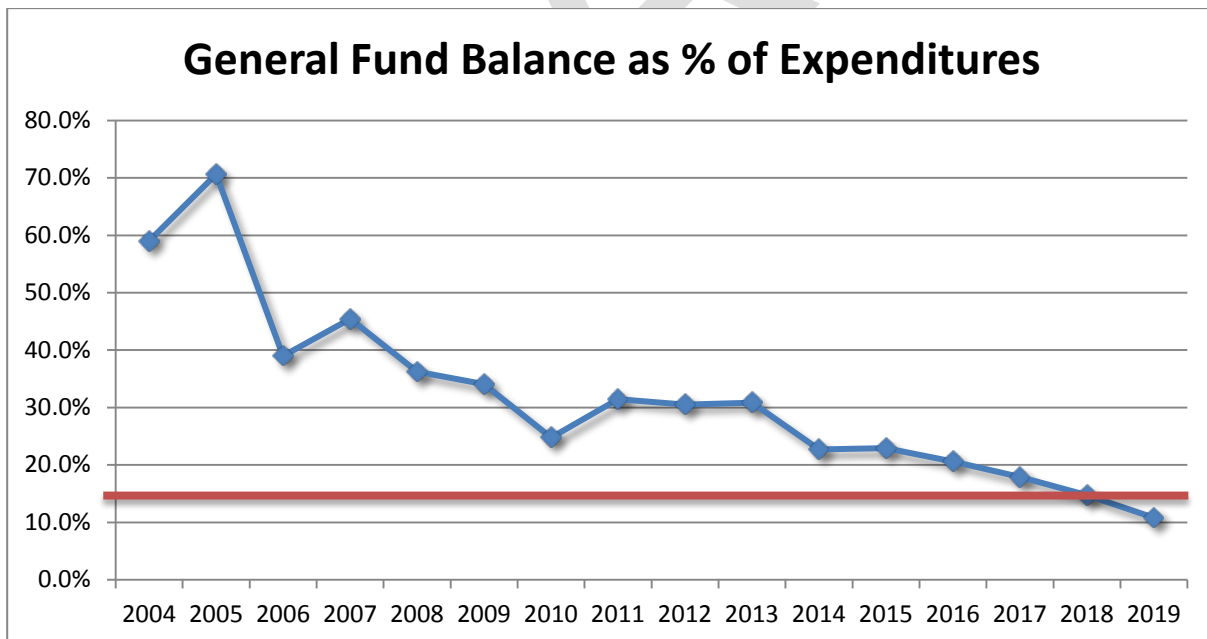
The growth also helped fund capital expansion within the City. In the last ten years, the City has spent \$36.6 million on transportation improvements within the City, in addition to \$20 million of other capital improvements and debt-financed infrastructure projects.

Since the start of the recession in 2007, the number of SFR permits issued has declined and has not returned to pre-recession levels. SFR permits have historically been an indicator of future economic

**ECONOMIC DEVELOPMENT****Support Analysis**

growth given the steps in the revenue process for the City. Permits issued by the City result in construction sales tax while the homes are being built. Sales tax is the second largest revenue source for the City, after property taxes, and construction sales tax makes up approximately 20% of total sales tax collections. Once the home is constructed, the City receives a portion of real estate excise taxes (REET) based on the value of the home sold. REET by definition is a one-time revenue source collected at the time the new home is initially sold, then collected again later when and if the home is resold. The use of REET revenue is restricted to certain capital improvements. In Maple Valley, REET has historically been used to fund transportation and recreation improvements. Once the home is sold, the City annually receives additional property taxes based on the assessed value of improvements to the property. The City also receives a number of other on-going revenue sources from new SFR units including sales tax from purchases made within the City, utility taxes, and various other taxes and fees.

Due to the slowed pace of residential development within the City and the resulting impact on City revenue, the City has made use of reserves to fund the purchase of the Lake Wilderness Golf Course in 2006 as well as made various other investments in other operating and capital needs. This has resulted in a decline in the General Fund balance from a high of over 70% to just over 20%. With the declining inventory of available new but as yet undeveloped SFR plots, it is anticipated the use of City reserves will continue into the future. The City's six-year financial forecast shows reserves declining below the Council-adopted target of 16.7% of General Fund expenditures sometime in late 2017 or early 2018.



The forecast assumes 70 SFR permits per year issued between 2015 and 2020, as well as annual permitting of 100,000 square feet of commercial development. The City is rapidly approaching build-out of available residential lots. The current inventory of approved but undeveloped lots is 49.

COMPREHENSIVE PLAN ED-3



ECONOMIC DEVELOPMENT

Support Analysis

Developers have approval from the City's Public Works & Community Development Department for an additional 183 expected to receive engineering approval by the end of 2015. At the projected rate of 70 SFR permits issued annually, those lots will only last just over two years. There is currently no other SFR development of any significant size that would materially change the date at which the inventory of SFR plots will effectively be depleted with the exception of the possible annexation of approximately 70 lots on the Rainier Ridge development.

The forecast for 2015 through 2019 currently shows expenditures exceeding revenue by approximately \$500,000 to \$1,000,000 each year. Economic development has the potential to provide the City with additional revenue, preserve existing services, and potentially provide new or expanded services. While residential development is on the decline perhaps indefinitely, there is potential for economic development through commercial development and/or redevelopment. Through zoning and a business-friendly regulatory environment, the City has the potential to attract and retain businesses in Maple Valley. Commercial development generates significant revenue for the City's operating and capital budget including building permit and plan review fees, transportation impact fees, construction sales tax, and real estate excise tax. In addition to these one-time revenue sources, commercial development will also provide on an on-going basis increased property tax through higher assessed valuation, depending on the type of development possibly sales tax generated within the City, utility taxes, and various other taxes and fees. Development in the Four Corners Square area, including Fred Meyer, Hop Jacks, a new Johnson's Hardware, and a number of other businesses, offset the decline the City experienced with the loss of State shared revenue for liquor profits and liquor taxes. Similarly, future commercial development has the potential to offset flat or declining residential development.

BACKGROUND

Since its incorporation in 1997, Maple Valley's growth has been driven by its attractiveness as a bedroom community for the greater Seattle and King County region. The City's jobs-housing ratio is low, which is reflected in its tax base: 80% of revenues derive from residential taxes and 20% from commercial sources. Commuting patterns also reflect the low jobs-housing ratio, with an estimated 60% of residents leaving the City every day to go to work.

Elected officials, City staff and volunteers on the City's Economic Development Committee have recognized the importance of bringing new, higher-skill jobs to the City. The Fred Meyer development that opened in 2011 is an important new source of revenue and jobs for the City, but the jobs are at a lower wage level. City stakeholders who met with the International Economic Development Committee (IEDC) panel expressed interest in attracting high-technology, corporate, or light manufacturing uses that provide "living-wage" jobs, ideally located on some of the City's larger vacant parcels.

In addition to a desire for more living-wage jobs, a more diversified tax base is a pressing need because Maple Valley is approaching residential build-out. Though the City went through a real



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estate boom that increased housing stock roughly 40% from 2000 to 2010, the recent recession and the shortage of available land for additional housing means that future revenue growth will have to come from other sources. City Manager David Johnston spoke to the IEDC panel which visited the City in 2014 about the City's approaching "fiscal cliff," in which it will not meet the required reserve ratio for its funds if it continues to spend and generate revenues at current levels. It needs to generate new forms of revenue outside the residential tax base.

At the same time, City leaders and residents value Maple Valley's high quality of life, and therefore seek job growth that preserves and reinforces its brand as an attractive community for both residents and businesses in the region.

What Follows in This Element

This element is organized into four principle sections. The section following this overview provides an analysis of the City's strengths and challenges in the form of a SWOT analysis (strengths, weaknesses, opportunities and threats) in the areas of capacity and competitiveness.

The third section presents detailed recommendations for implementation organized into three broad areas:

1. Building capacity for economic development.
2. Maximizing employment opportunities on available land.
3. Setting the stage for long-term economic development success.

The fourth section of the report provides best practices and case studies of projects and initiatives from other communities that are relevant to Maple Valley. Case studies address capacity-building and communication initiatives, business retention and expansion programs, the development of an office park, and the establishment of a Regional Learning and Technology Center.

The fifth section of this element presents policy recommendations that the City can use as a basis for drafting the economic development component of its Comprehensive Plan update. These policy recommendations are based on the SWOT analysis and the detailed implementation recommendations. They are presented in a format comparable to the economic development sections of the comprehensive plans of Renton, Kent, Covington, and Auburn, which the IEDC team reviewed by way of background.

ANALYSIS OF STRENGTHS AND CHALLENGES

The following section analyzes the strengths and challenges to economic development in Maple Valley, focusing first on capacity and second on competitiveness.



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Capacity Analysis

Strengths <ul style="list-style-type: none"> • Change in City Council orientation toward economic development. • Economic development background of City Manager. • Engagement of private sector with Economic Development Committee (EDC). 	Weaknesses <ul style="list-style-type: none"> • Reactive economic development approach. • No economic development staff/ ED point of contact. • No program of work.
Opportunities <ul style="list-style-type: none"> • Untapped regional partners. • More defined alignment with the Chamber of Commerce. • Expanded contributions of EDC. 	Threats <ul style="list-style-type: none"> • Stronger economic development organizations in other communities. • Political risk. • Fiscal cliff. • Growth opponents.

Strengths

- Change in City Council Orientation Toward Economic Development
In the last five years, Maple Valley's City Council has been more active in prioritizing economic development for the City. Ushered in by changes in composition in 2008 and 2010, the Council has made decisions that have helped facilitate economic development, including passing an ordinance in 2009 to increase the maximum allowable square footage for a building from 60,000 (dating back to 1997) to 200,000 square feet, paving the way for Fred Meyer. In a process that moved quickly over about six months, the Council also approved the rezoning of the majority of the Brandt and Gravel Pit areas to Service Commercial (SC) to allow for industrial and commercial development.
- Economic Development Background of City Manager
Since he joined Maple Valley as City Manager in 2009, David Johnston has drawn on the background he gained while managing municipalities in Illinois and Indiana to bring economic development issues to the fore in Maple Valley. The existing Economic Development Committee formed in 2011 is taking steps to diversify the City's fiscal base by seeking to development vacant parcels, as appropriate, to develop employment centers in the City.
- Engagement of Private Sector with Economic Development Committee (EDC)
The Economic Development Commission was reconstituted as the Economic Development Committee in 2011, since then the Economic Development Committee has become an important resource for the City. Its members are rooted in the community and region and



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contribute a wide range of private and public-sector background and expertise. Members have a strong grasp of economic development issues as evidenced in their February 2012 recommendations to the City Council. This group can continue to play a role in supporting community and economic development initiatives in Maple Valley.

Weaknesses

- Reactive Economic Development Approach
In the past, the City has been perceived more as being “open to business” than “open for business.” The experience of the Fred Meyer development that took several years to bring to fruition is a case in point. With the development, the City experienced a learning curve in terms of facilitating the attraction and development of a new business, from land use changes to permitting and other facets of service delivery.
- No Economic Development Staff/Point of Contact
Maple Valley is a small municipality and budget constraints will likely prevent it from having a full-time economic development staff person in the near future. Improvements can be made by establishing a single point of contact for existing businesses and new prospects that walk into City Hall, as well in determining the City’s follow-up approach.
- No Program of Work
Though the City has taken steps to focus on economic development, it does not have a specific program of work in place.

Opportunities

- Untapped Regional Partners
Many entities in the region can become stronger partners with Maple Valley as it embarks on its economic development efforts, including, most notably, the Economic Development Council of Seattle and King County, the Puget Sound Regional Council, and the community of real estate developers in the region. There is a lack of awareness among these partners about the City’s change in orientation toward economic development and its vacant parcels for industrial development. Additional partners are discussed further on in this report.
- Partner With the Chamber of Commerce
The Maple Valley-Black Diamond Chamber of Commerce performs a valuable service to Maple Valley by serving many local businesses’ needs, especially in the retail sector – including assistance with permitting and licensing, marketing for the retail industry, and lobbying on behalf of the business community. The City can build upon the Chamber’s existing capacity and networks.
- Expanded Contributions of the EDC
The EDC has members from a wide variety of private and public backgrounds who can provide expertise in terms of site development, developer connections, communication with the public, business retention, and more.



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Threats – as Identified in the IEDC Report

- Stronger Economic Development Organizations in Other Communities
This is a threat that Maple Valley will continue to face but can mitigate somewhat by making the best of its existing assets and building its capacity.
- Political Risk
Community surveys indicate a split opinion among Maple Valley residents when it comes to economic development.¹ Some support growth that prioritizes employment centers, while others oppose it or are wary of its need in a historically residential community. This diversity of opinion was evident during the IEDC panel's visit, during which some stakeholders described Maple Valley as "rural" and "residential" while others spoke about its "potential." Any growth will inevitably be seen as positive by some and negative by others.
- Fiscal Cliff
The City Council recently increased the reserve requirement for the City from 10% to 16.7%. Based on current cash flow projections, by 2017 the City will no longer meet the required fund balance of 16.7% if its revenues and expenditures remain the same. Because the City's revenue base growth has slowed with the declining rate of new residential construction, new sources of revenue are needed.
- Growth Opponents
Some residents resisted changes to the zoning code for properties in the North End. Growth opponents are likely to be a vocal force when specific proposals are on the table and development ensues in the North End, and may be as well when zoning changes and developments are proposed with regard to Summit Place.

¹ Herbert Research, Inc. (May 12, 2012). *City of Maple Valley Community Survey 2012 Executive Summary*.



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Competitiveness Analysis

Strengths <ul style="list-style-type: none"> • Available land. • Fiber capacity. • Proximity to international airport. • High City bond rating. • Regional growth. • Location out of flood plain. • Lower-cost location. 	Weaknesses <ul style="list-style-type: none"> • “Outer ring” location. • Traffic congestion. • No building inventory. • Lack of site readiness. • Lack of business case for the City. • Brand/reputation.
Opportunities <ul style="list-style-type: none"> • Regional Learning and Technology Center. • Regional workforce draw. • Strong developer market. • Underutilized zoning. 	Threats <ul style="list-style-type: none"> • Increasing traffic congestion. • Competitor communities.

Strengths

- Available Land
Maple Valley has a critical mass of vacant property that could come online for development in the near future. This is a major strength for the City, as sizeable, industrial-zoned vacant parcels are rare in King County. The 154-acre “Summit Place” site will have a new high school/Regional Learning and Center on 35 acres, while commercial and industrial uses could follow on much of the balance of the property. The 50-acre Legacy Site, owned outright by the City, has potential for a mix of public and private uses further down the line.
- Fiber Capacity
The City has three fiber lines operated by Integra Telecom, Century Link and WAVE that are currently not being utilized additionally the City is served by Comcast Broadband. All of these offer sufficient capacity to meet the computing needs of technology companies.
- Proximity to International Airport
Maple Valley is 20 miles from Seattle-Tacoma International Airport.
- High City Bond Rating
The City’s AA+ bond rating is strong signal for investors.
- Regional Growth
Recent figures from the U.S. Bureau of Labor Statistics show that King County has recovered faster from the recession than both the state of Washington and the United States. As identified by the Economic Development Council of Seattle-King County, the region has



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strong economic performance in sectors that include aerospace, clean tech, financial services, interactive media, life science, international trade, and technology.

- Location Out of the Green and Cedar River Flood Plains
Relative to other neighboring cities in the region, Maple Valley has an advantage by being located outside of both the Green and Cedar River flood plains, which reduces insurance rates (according to Herbert and Associates).²
- Lower-Cost Location
Because it is located farther from the major metro centers of Seattle and Tacoma, Maple Valley can offer greater cost competitiveness for land and associated development compared to other communities in the Puget Sound Region (an “undiscovered bargain”).

Weaknesses

- “Outer Ring” Location
Maple Valley is located roughly 30 minutes from both Seattle and Tacoma, at the edge of the county’s urban growth boundary and the foothills of the Cascade Mountains. The City’s setting is picturesque, but its “outer ring” location is a detractor for businesses that want to be closer to the Seattle City Center, I-90, Sea-Tac, or other such assets. For these reasons, the City must document a stronger business case in comparison to many competitor communities.
- Transportation
The City is located on SR 169, a two-lane State highway that becomes congested with commuters. The City lacks direct access to Interstates 5 and 90, although the SR 18/SR 169 interchange is located halfway between them.
- No Building Inventory
While there are a few vacant retail buildings in the City, there are no vacant flex-tech, manufacturing, or large-scale office buildings available for new or expanding businesses.
- Lack of Site Readiness
While Maple Valley has vacant sites, they currently are not fully ready to be successfully marketed. Detailed site documentation is needed, and a data package needs to be assembled that provides all the information a developer would need to take on a project.
- No Business Case for Maple Valley
Documentation of the assets that prove Maple Valley is a choice location for business needs to be assembled. A business case is more than a marketing tool; it demonstrates that the City understands the needs of business and can address those needs. While quality of life is valuable for residents, factors such as labor draw, site readiness, and other variables are

² Jim Herbert, Hebert Research Inc., personal communication, Nov. 22, 2013.



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critical in the decision-making process of a developer or business (end user) and need to be identified and supported with data. The business case should be written in specific terms relevant to business, rather than a marketing brochure.

- Brand/Reputation

Historically, Maple Valley has been perceived not particularly friendly to development, due in part to a slow permitting process and regulations limiting size and height of buildings. It also has a strong brand as a residential community, which comes with advantages and disadvantages. It highlights Maple Valley's strengths in quality of life, including schools, recreation, and natural beauty, but it detracts from its identity as a place where developers would build employment centers or where primary employers would locate.

Opportunities

- Regional Learning and Technology Center (RLTC)

The bond measure paving the way for the new high school to be built on the Donut Hole/Summit Place property is an exciting beginning to a planned multi-institutional Regional Learning and Technology Center. The Center will occupy 35 acres of the 154-acre site, leaving space for businesses to locate adjacent. Synergies between educational institutions and business could come in the form of a workforce pipeline of graduates, apprenticeship and learning opportunities, and worker training programs. Additionally, current discussions about the curriculum and design of the Regional Learning and Technology Center can bring together a range of partners that will be important to Maple Valley moving forward, including workforce development, industry associations, major area companies, and business development interests.

- Workforce Draw

Anecdotal assessments of the Maple Valley workforce indicate a talented pool of workers in professional services, technology, and other high-skill industries. These workers commute to Microsoft, Boeing, and other major (and minor) companies across the region. Maple Valley has access to its own pool of skilled workers as well as those available throughout the regional laborshed, a compelling draw for new employers.

- Strong Developer Market

King County and the four-county region have a strong market of developers with whom Maple Valley can build relationships.

- Underutilized Zoning

Zoning changes can be made to ensure that sites of future employment centers are restricted to uses that produce living-wage jobs. Zoning changes also can be made to encourage greater mixed uses and employment generation on existing inventory.

Threats



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- Increasing Traffic Congestion
SR 169 is already a major source of congestion through the area, and further development in Black Diamond and from other uses will exacerbate the traffic. Some changes undertaken by the City to improve traffic flow of SR 169 in the Four Corners area will improve this, but traffic problems related to SR 169 are largely an exogenous issue.
- Competitor Communities
Competitor communities include Black Diamond to the south that has a master plan for a mixed-use development that could include 6,000 to 8,000 residential units and one million square feet of commercial space. Other neighboring communities in South King County also are trying to attract economic-base businesses and some are pursuing economic development niches in particular sectors.

RECOMMENDATIONS FOR IMPLEMENTATION

The following recommendations are organized under three themes:

1. Building capacity for economic development.
2. Maximizing employment opportunities on available land.
3. Setting the stage for long-term economic development success.

Maple Valley is in a good position to begin focusing on economic development. As it does so, however, it should be mindful of the critical role that partnerships will play as it proceeds. The City's small size and limited staff capacity, as well as its location in a competitive, multi-city metropolitan region, mean that Maple Valley will need to focus externally in a way that it has not in the past. Cultivating partnerships with a range of groups in the region will be key to maximizing its capacity.

The City already has working relationships with many of the partners that the IEDC team sees as critical moving forward. However, some partnerships will be new and the nature of existing partnerships with other entities will change. Those key partners are:

- The City's Economic Development Committee.
- The Maple Valley-Black Diamond Chamber of Commerce.
- The Economic Development Council of Seattle and King County.
- The Puget Sound Regional Council.
- The Workforce Development Council of Seattle-King County.
- King County.
- State of Washington.

Each of these partnerships will be discussed in greater detail below according to function.

Building Capacity for Economic Development



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Make the Case for Economic Development Through a Comprehensive, Ongoing Education and Communication Program

Having been a rural community just 20 years ago and then growing into a bedroom community, Maple Valley's new focus on economic development may be somewhat surprising to many of its residents.

To gain support for these efforts and keep citizens informed, the City has an important role to play in helping them understand why focusing the City's time and resources on economic development is necessary. At the same time, it will be critical also to provide reassurance that economic development can be achieved in Maple Valley without comprising the high quality of life those residents rightly prize. This communication and education will be especially important over the next year during the comprehensive planning process and as the City seeks to attract economic-base employers to undeveloped parcels.

Key messages around shifting to an economic development focus can be shaped around averting the "fiscal cliff." This is a compelling concept that, reiterated in multiple ways through multiple venues, stakeholders, and communication vehicles, should resonate with City residents and businesses. Previous City surveys indicate that residents dislike the idea of reduced services or higher taxes, and City leadership should be commended for being proactive and taking actions with a long-term view.

Themes that tie into the fiscal cliff conversation include:

- How the City's Revenue Base is Changing
Part of the discussion of the "fiscal cliff" involves educating residents about the way that growth in City services has been funded in the past – through residential/building permit growth – and the options for growing the revenue base in the absence of continued housing development. City Manager David Johnston noted during a meeting with the IEDC team his goal of reducing the City's tax base from 80% residential to 60%.

This would include, for example, education on how economic development works (e.g., "The Flow of Money"); the difference between "economic base" or "primary" employers and local-serving businesses, and the multiplier effect.³ These concepts can be simplified and reiterated as part of a public outreach program.

- Job Growth will Benefit Residents and Local Businesses, Not Just City Coffers

³ The multiplier effect occurs when an increase in employment in an export (or economic base or primary) industry leads to an increase in employment in non-export (secondary) industry. In other words, increased export industry activity increases the dollars circulating in the local economy, which then increases demand for the products and services provided by non-export industries. Source: IEDC Economic Development Planning manual.



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The possibility of increasing living-wage jobs in Maple Valley brings with it the possibility of increased daytime activity and population to patronize local businesses. It also brings with it the possibility that fewer residents will have to commute 20, 30, 60 minutes or more each way to a good job.

- The Limited Supply of Available land
Because it is unlikely that the City will expand geographically, the remaining large tracts need to be preserved for job growth.
- Improving Options for Eventual Development of the Legacy Site
Economic development and improved City revenues will allow for more flexibility) and opportunity, in the eventual planning and development of the Legacy site.

There are multiple avenues the City can use to transmit these messages. Elected officials and the City's Economic Development Committee likely will be the most credible and influential ambassadors. They can assist in educating and communicating with residents through City Council meetings, attendance at service clubs and similar civic and association functions, and other methods including use of traditional and social media. Both in manner and content, communication with residents and businesses should be transparent and timely.

Cultivating positive working relationships with local and regional journalists can help ensure that key initiatives are covered in the media. Key players in economic development (e.g., the City Manager, Mayor, or Chair of the Economic Development Committee) could consider writing a weekly, regular or even occasional column in the Voice of the Valley, Maple Valley Reporter, and/or other local publications. The City also should develop a social media presence.

In terms of communicating with existing businesses, the City has an opportunity to provide assurance that it values them and that non-retail businesses growth will complement, rather than compete, with the existing base. The growth of new businesses in Maple Valley will generate new revenues, decreasing the prospect of tax increases for existing businesses and residents. Furthermore, by virtue of a multiplier effect, new businesses may create new markets for existing businesses. Technology, office, and industrial development will employ a high density of workers per square foot that will increase the daytime population and support existing retail businesses, as well as spur demand for new retail businesses (e.g., cafes and business services).



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Partner Spotlight: Maple Valley Economic Development Committee

The 18-member Economic Development Committee (EDC), created in 2011 (restructured from the previous Economic Development Commission), is a valuable group of stakeholders who have knowledge of the City and of economic development, and have been effective in recommending and pushing for such initiatives in the community.

The EDC has public-sector members from utilities and the school district, nonprofit members from the Chamber of Commerce and the Center for Advanced Manufacturing-Puget Sound, and private-sector members involved in real estate, environmental engineering, and other industries. In short, the committee represents the spread of interests necessary to guide and further economic development in the City.

The IEDC team believes that the EDC can continue to play an important role moving forward. The group can be useful in outreach and communication efforts around “making the case” for economic development (discussed above), participating in business visits as part of a business retention program, outreach to developers and new business prospects in the City, and participating in discussions to shape the development of the new Regional Education Center (all discussed below).

Establish an Economic Development Service Model Within the City

Maple Valley is a small municipality and budget constraints may prevent it from hiring a full-time economic development staff person in the near term. However, as it prepares to market its larger properties for development, it will be important for the City to have a single point of contact for developers, expanding businesses or new prospects that walk through the doors of City Hall.

Beyond establishing an initial point of contact, a team approach for follow-up on specific issues with individual businesses is necessary. Timely, efficient, and responsive follow-up is crucial to strengthen the City’s claim of readiness and commitment to business. For example, such a team may include the City Manager, Public Works and Community Development Director, with other City employees assisting on an ad hoc basis when necessary.

Although the City needs to organize an internal service model, it is important to also remember that economic development is a team sport. In other words, the City’s role is to facilitate resources for businesses that are both internal to the City and those that involve external resource partners. Common partners for a city’s economic development team include service providers such as public and private workforce agencies, utilities, financing, etc. The City’s economic development team should meet regularly to share updates on projects, general economic issues, new resource offerings and services, and other specific inquiries.



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Develop a Business Retention and Expansion Strategy

Because 70 to 80% of all job creation reportedly comes from existing companies, business retention and expansion (BRE) is considered the bedrock of an effective economic development program. At its most effective, business retention is a customer satisfaction program designed to gain intimate knowledge of local businesses and their industries, as well as to provide seamless service to address problems businesses face as they operate in a community. Business retention is also about building long-term relationships.

Another advantage of participating in a business retention and outreach program is the opportunity it provides the City to deliver the message about the benefits that economic development can bring to new and existing businesses. From conversations with the IEDC panel, it seems that many Maple Valley businesses understand this advantage and support the idea of bringing more jobs to the community. It will be important that the City stresses in its communication with businesses that its economic development focus does not mean a tradeoff to the detriment of existing businesses, or between retail businesses and other commercial/industrial businesses.

Work with the Chamber to Define Roles Regarding Business Retention and Expansion

The Greater Maple Valley-Black Diamond Chamber of Commerce already engages in many business retention and expansion activities. It serves as the “welcome wagon” for new businesses, refers businesses to service providers, provides networking opportunities, and advocates for business interests. It is the one with the information at its fingertips regarding inventory for businesses inquiring about locating or expanding in the City, and it helps existing businesses navigate the City process of inspections, licenses, fees, and other needs. By virtue of its existing work, the Chamber will continue to play an important role in business retention.

However, a formal business retention program goes further, with regular calls and visits to businesses. The IEDC recommends that the City (perhaps in partnership with volunteers from its Economic Development Committee) begin a program of identifying and calling on non-retail/primary/economic base firms that provide living-wage jobs and have the potential to grow in Maple Valley. The Chamber would remain responsible for business retention activities that involve retail and local-serving businesses.

Such a program will help the City better understand its business community and build relationships that can lead to firm growth and to the possible location of employers at the new sites it plans to develop as employment centers.

Although the Chamber currently plays an important role in BRE and will continue to do so, the City needs to be a participant in the process, and the division of responsibilities needs to be formalized so that the partners know their role and businesses know where to go for assistance.

Engage in Calls, Visits, and Ongoing Relationship-Building With Local Businesses

Developing relationships and a continual dialogue with existing businesses is where a BRE program begins. The IEDC panel recommends that the City’s BRE program include calls, visits, and ongoing



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relationship-building. One way the City can overcome its limited staff capacity for such activities is by having volunteers assist – a common approach in many communities – which could be a role for the Economic Development Committee.

A calling program can help the City identify issues facing businesses that are hampering their growth or may influence them to close or leave. It can also help the City and EDC gain knowledge of potential growth firms that currently fly under the radar and that, connected to the right resources, could grow and employ more Maple Valley residents with living-wage jobs.



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Regional Partner Spotlight: The Economic Development Council of Seattle and King County

The Economic Development Council of Seattle and King County (EDC-SKC) is a public-private partnership focused on economic development for King County and its 39 cities. One of the Council's primary functions is to *"provide confidential consulting services free of charge to businesses seeking to relocate, grow, or establish themselves in Seattle and King County."*

Through interviews as part of this process, it emerged that the EDC-SKC has been insufficiently aware in the recent past of some of the large, vacant parcels that Maple Valley can offer to newly locating businesses. This is due partially to the fact that the parcels may comprise several contiguous lots (in the case of the North End) and not turn up in real estate search engine results, or that the property has just become available under the City's jurisdiction (as in the case of Summit Place). It is crucial that the City stay in regular contact with EDC-SKC to update it on available land and building inventory options for new businesses seeking to locate in King County.

Additionally, the City should engage EDC-SKC to tour the properties and become acquainted with their location, infrastructure, and other characteristics so that the council can better inform prospects. The City has taken steps in the past few months to coordinate with the EDC-SKC to update Maple Valley's information on its website to reflect current data and vacant land opportunities. Because there are few undeveloped, industrially zoned parcels in King County, this kind of update is crucial so that Maple Valley is visible with current information.

The City should ensure that all its strategic partners have updated information about Maple Valley, including baseline data and information on development prospects for their websites, marketing materials, and general knowledge base, especially those strategic partners that may represent the city in any capacity to the developer community.

The EDC is also a valuable source of information for strategic planning in economic development. The EDC has targeted eight industry clusters: aerospace, clean tech, financial services, interactive media, life sciences, international trade, technology, and fashion. The organization also provides a valuable data bank on doing business in Washington, economic basics, key industries, and forecasts. If and when Maple Valley targets a niche industry or cluster, it should consult EDC-SKC (as well as the Puget Sound Regional Council) for information on industry clusters in the county and region.



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Regional Partner Spotlight: Puget Sound Regional Council

The Puget Sound Regional Council (PSRC) represents the four-county region of King, Pierce, Snohomish, and Kitsap Counties with the mission of ensuring a thriving region through planning for regional transportation, growth management, and economic development. The City should tap into the resources of the PSRC for technical assistance, data and research, transportation funding, and possible participation in programs such as its regional growth center program.

The time is ripe for Maple Valley to engage with PSRC. Its new Director, Josh Brown, is interested in meeting all members in the region, including smaller members. Maple Valley Mayor Bill Allison initiated a relationship with the previous director, Bob Drewell, who was in touch with PSRC's economic development arm about Maple Valley after the Director toured the City with the Mayor. Now that a new Director, Josh Brown, is at the helm of PSRC, the City should reengage with the Council.

There are multiple benefits to engagement with PSRC. It is the metropolitan planning organization for the four-county region charged with disbursing federal transportation funds. Among other criteria, disbursement is based on the "regional good" – i.e., transportation improvements that benefit not just one jurisdiction but also the region as a whole. Some of Maple Valley's transportation projects, especially related to state highways SR 169 and SR 516 (and in conjunction with a new regional employment center and regional education center) could meet this criterion. Becoming more familiar to PSRC can only help Maple Valley with its requests for transportation funding.

Maple Valley also can avail itself of PSRC's repository of data and information and its technical assistance. PSRC will conduct custom data searches upon request and maintains a wealth of information about industry clusters. It also offers technical assistance, including with review of a community's draft comprehensive plan ahead of certification of the plan.

While Maple Valley may not be eligible for designation by PSRC as a regional growth center or regional manufacturing/industrial center in the short term, it can examine the criteria and consider applying for designation as a regional growth center when conditions are ripe. Currently, 27 cities and neighborhoods are designated as regional growth centers, while eight areas are designated regional manufacturing/industrial centers. The regional growth centers have criteria including a focus on high density and planning for a city center, something Maple Valley could achieve in the future. (Manufacturing/industrial centers are applicable to communities with a minimum of 10,000 manufacturing jobs and therefore would not apply to the City.) Designation as a center gives a city more "points" when it comes to receiving regional funding, and PSRC also works with these centers to develop and implement their plans.



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Maximizing Employment Opportunities on Available Land

The availability of large parcels of land for potential industrial development is a distinct advantage Maple Valley has over other communities in King County. However, among the three major sites the IEDC team reviewed – the North End (Gravel Pit property), Summit Place (Donut Hole) and the Legacy site – each has varying advantages and limitations for development (discussed in more detail below). Therefore, the IEDC team recommends that the City prioritize development of the sites in the following order:

1. North End.
2. Summit Place.
3. Legacy Site.

The team recommends that the City approach projects sequentially for several reasons. First, the City will be beginning its first major economic development project with limited staff, organizational capacity, and experience with such projects. Sequencing also will have the benefit of building both capacity and momentum for development among developers, residents, and potential end users. The success of one project breaking ground and generating jobs will increase the likelihood of success for future projects.

Regarding Summit Place, appraisals by both King County and developers (completed as recently as 2013) have indicated that the highest and best use for the site was residential/mixed-use. (The name “Summit Place” actually came from a proposal by the developer YarrowBay for a master-planned development with more than 1,600 residences along with some retail and commercial uses.) However, more residential does not fit with the City’s aspiration to increase its jobs to housing ratio.

The appraisals do not mean that technology-based, office, or light industrial development is not possible on the site; however, the City will need to work, over time, to position the site for employment-generating uses. Success with the development of the North End site, increased capacity for economic development at the City, improved perception of City interest in economic development, stronger and more robust partnerships, and the development of the Regional Education Center (high school and community college) all will help build interest and feasibility in Summit Place for employment-generating uses. In other words, the North End site has the best potential, , to catalyze high-level employment and development opportunities at Summit Place and elsewhere in the City.

Prepare and Market the North End as a Regional Employment Center

The North End is comprised of the 60-acre J.R. Hayes Gravel Pit property, and smaller residential lots adjacent to the Brandt property and Gravel Pit. The properties are located at the northern end of the city near the intersection of SR 169 and SE 240th Way, extending northwest to the east of SR 169.



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Support Analysis

Improving Readiness

Maple Valley has begun to change its orientation toward economic development in the last few years, but it now must focus on specific steps to improve its readiness that match the change in orientation.

The steps discussed below are included in this section of the North End because the IEDC team believes this property should be the City's priority for development, as discussed earlier. However, many of the steps outlined below will apply to later development projects in the City.

- Revise the Zoning Code to Maximize Economic Development Potential

Recent zoning changes to North End properties applying a SC designation allow for commercial and industrial uses but do not restrict uses to those that generate living-wage jobs (in alignment with the City's goals). Retail uses are still a potential outcome for the site. The City recommends changing its zoning designations on the North End site to preserve it as a site for primary/economic base employers with limited retail. For example, in some communities, a "business park" zone will allow for limited service businesses and retail that supports business park tenants but not outside customers (allowing for uses such as coffee shops, delis and copy shops). The primary purpose is to add convenience, not expand the market.

- Compile and Prepare Data to Inform a Request for Proposals

Preparing to go to market with a property requires considerable homework. Securing a developer for a major project is no easy feat, and the numbers have to match up. This section outlines the documentation the city should compile to make its case to the development community.

- *Market Analysis*

To prepare to work with a developer(s), the City needs to have a market analysis completed for the North End. This analysis should include information on other comparable building inventory in the region and a brief target industry analysis describing what types of tenants would be most attracted to the product.

Data from the Puget Sound Regional Council could be used as a base for estimating business growth and relating that to physical space and other locational determinants.

Once a developer signs on to the project, they will conduct more sophisticated market analysis, but the city needs to have baseline information available at its fingertips to offer to prospects.

Components of a Market Analysis

- Non-residential land use map/land use designations.
- Average lot and build sizes.
- Parking ratios.
- Vacancy rates.
- Projected absorption rates for land.



ECONOMIC DEVELOPMENT

Support Analysis

○ *Laborshed Analysis*

Laborshed studies are now part of the package that developers and prospects expect as part of a city's marketing materials. The availability of labor is among the most critical location factors for a business.

The IEDC team believes that Maple Valley's workforce, as well as the regional laborshed (the area from which an employment center draws commuting workers) is one of the City's strongest selling points. The laborshed analysis will be one of the most important resources for motivating a developer because it provides an incentive for companies to locate in Maple Valley. The analysis will provide greater characterization of the occupational skills of the local and regional labor force. Communities that can document wages, education, current areas of employment and other characteristics of their workforce have a competitive advantage over those that rely on anecdotal, outdated or less detailed information.

At the North End site, Maple Valley will be developing a Regional Employment Center that will draw workers not just from the city but also from the region. The same is likely to hold true for new businesses at the Summit Place site.

The Washington State Employment Security Department is a good source of labor data for the city. It will do free or low-cost custom analyses on the workforce in King County, Pierce County and for specific zip codes and municipalities, and document characteristics including age, education, SIC, and NAICS codes.

○ *Benchmark Entitlements and Taxes to Neighboring Competitors*

Multiple municipalities in the area are seeking developers and economic-base employers. In order to compete successfully, the city needs to be knowledgeable of the impact fees, license fees, taxes and costs of other entitlements associated with development in surrounding jurisdictions. This is another area in which the EDC-SKC may be able to provide assistance.

● Take Steps to Engage a Developer

○ *Host a Pre-Conference and Conference with Developers*

In advance of creating a request for proposals, the IEDC team recommends that the City hold a pre-conference with developers to get to know prospective players in the field. The goal is to gauge interest, answer questions and address concerns. This will give the City valuable feedback it can use to address strengths and weaknesses as it crafts an

Components of a Workforce / Laborshed Analysis

- Demarcation of "laborshed" area and associated data.
- Projected population, age, and race.
- Education and income levels.
- Employment by industry type (2-digit NAICS code)
- Employment growth projections



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Support Analysis

initial RFP and help ensure that it has sufficient information on hand to help a developer commit to a project. The EDC-SKC should be a resource to help the City connect with developers.

Following the RFP's issuance, the City should host another conference to answer additional questions and continue to build relationships and establish accessibility with potential developer partners.

- *Prepare a Request for Proposals Package with Detailed Site Analysis Information*

The RFP package should outline the City's vision for the property as an employment center and provide all the basic information that the developer would need to make a preliminary decision on the feasibility of the site for a project.

The RFP package will need to include elements of the market analysis, workforce analysis and a site analysis. Once the City has secured a developer partner, all of these elements will become more detailed, but a strong preliminary package that contains these elements is crucial to recruiting a developer.



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Support Analysis

Site Analysis Checklist

Prepare general background information on the site, including:

- Brief description of proposed development (types of uses and characterization).
- Site specifications (location, size, slopes, services, other factors affecting development).
- Net buildable area of site.
- Proposed site coverage.
- Projected building costs per square foot.
- Projected net leasable space.
- Proposed number and sizes of lots.
- Building(s) sizes and characteristics (number of floors, ceiling heights, special features).
- Acquisition cost of site.
- Parking, landscaping, common areas.

Perform initial site planning to determine barriers, costs, special considerations to determine the suitability and costs of developing the site for the intended uses. These include:

- Topographic survey of the site.
- Soils and foundation conditions.
- Lot layout plan.
- Street system plan.
- Main highway access plans.
- Utility capacities, off-site and on-site requirements to serve the site.
- Water line infrastructure.
- Wastewater line infrastructure.
- Drainage issues.
- Environmental issues.
- Site-specific analysis.

- Utilize Incentives

Incentives can take many forms. Though Washington State prohibits giving incentives in the form of cash or in-kind offsets, Maple Valley has other assets it can use to attract businesses. Chief among these is the level of service Maple Valley can offer, marketing its ability as a nimble and efficient municipality with minimal red tape. With the residential boom of 2000 to 2007 effectively at a close, City resources previously devoted to this development may possibly be redeployed to devote time to economic development projects.

Expedited permitting and 24-hour inspection response time are two examples of high-value services to developers for whom time equals money. Developing capability and a reputation around efficient, responsive service will create a “virtuous circle” that both changes any preconceived notions about Maple Valley not welcoming new development (based on stories from the past) and encourages new businesses and developers to consider the City.



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Other ways that the City can incent development include:

- Deferring permitting fees until the developer lands a tenant.
- Dedicating an ombudsman to developers or end users for permitting and development services.
- Working with a developer to package and articulate state and federal statutory incentives for end users. Incentives frequently go unused because of the complexity of the programs. The city can play a service role to facilitate greater utilization of available incentives.

Position Summit Place Now for Longer-Term Potential

Summit Place (a.k.a. the “Donut Hole”) is a 154-acre property off Kent-Kangley Road SE and SE 228th Street. It is currently home to nine holes of Elk Run Golf Course, wooded areas, and the County’s 13-acre roads maintenance facility. The remainder of the site is vacant.

Key Assets of the Site

The City and County have entered into an interlocal agreement that allows the City to control development of the site while enabling continued operation of the County’s roads maintenance facility until the County is able to relocate it.

The Tahoma School District is in the planning phases to build the new Tahoma High School on 35 acres of the Summit Place property. The new school will be a significant asset for Maple Valley. The site is planned to be a Regional Learning and Technology Center – a multi-use campus that also will provide community access for learning and training to compliment the new high school campus. The high school is scheduled to open in September 2017. Apart from the 35-acre Regional Learning and Technology Center, over 100 acres will remain available for development on the site.

Many partners are involved in the development of the Regional Learning and Technology Center, including the Tahoma School District, Green River Community College, Center for Advanced Manufacturing Puget Sound (CAMPS), and area companies and workforce partners. These partnerships reflect the innovative nature of the Regional Learning and Technology Center that will help feed a workforce pipeline that can supply highly skilled workers to companies in Maple Valley and the region.

Recommended Approach

Previous appraisals of the site by the County and developers notwithstanding, the IEDC team believes there is potential to develop and attract businesses with high-quality jobs at the site, especially those that can have a synergistic relationship with the educational resources at the learning center. Students can receive hands-on education at the businesses, while businesses can benefit from a pipeline of new workers and also have a facility for training their workers nearby.



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Support Analysis

- Rebrand the Site

The IEDC team recommends that the City rebrand the site (which could be as simple as renaming it). The name “Summit Place” refers to a former proposed residential development at the site, a vision from the past, not the future. Furthermore, the name “Donut Hole” does not present a vision of the site’s future potential, but rather its configuration in terms of local jurisdictions. The new name should reflect the visionary spirit of the Regional Learning and Technology Center and reflect the synergy of education, workforce, and industry that will be a unique regional asset.

Branding suggestions from the IEDC team include “Puget Sound Technology Center” or “Puget Sound Skills Center” to elevate its prominence in the region.

- Capitalize on the “Regional Learning and Technology Center” Concept

Maple Valley has the potential to be widely and uniquely known as home to a novel multi-institutional, public-private training, educational, and industrial center in the region. The City should realize and take advantage of the potential economic development benefits presented by such a unique opportunity.

Major companies already are involved in Maple Valley by virtue of their engagement with the Tahoma School District in developing curricula and training programs for the center. These and other companies are potential employers for vacant sites that will be developed in Maple Valley, including Summit Place itself. In its communication with prospective developers and businesses for current vacant sites, the City should aggressively promote the opportunities to be a partner in development of the Regional Learning and Technology Center to take advantage of the workforce and training opportunities it presents.

- Partner with Educational, Workforce and Industry to Maximize the Potential of the Programming and Land Use at the RLTC

School district representatives, in meeting with the IEDC team, noted that the City had been an important partner in helping pass the bond initiative for construction of the school. To the extent possible, the City should also be a partner at the table when stakeholders relevant to workforce, industry, and education discuss goals for the Regional Learning and Technology Center, in order to assure alignment with local economic development goals.

Through its “visioning project” for a multiple-use facility at the Regional Learning and Technology Center, the Tahoma School District is building important relationships with workforce and industry partners, including Green River Community College, Renton Technical College, (CAMPS), and private businesses. These same stakeholders are important for economic development projects the City is undertaking and the City should be an active participant.



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- Zone for Maximum Economic Development Benefit

As noted above in the discussion of the North End-Phase One site, the remaining property at Summit Place (apart from the RLTC) should be zoned to allow for uses consistent with an employment center for the City. The employment center should be oriented toward technology, light industrial, and office campus uses that would be complementary to the training and education facilities at the RLC and aligned with the City's goals to secure living-wage jobs. Any retail or local services permitted at the site ideally should serve the site only, not a broader market.

Partner Spotlight: King County Government

King County and the City of Maple Valley are partners on the joint planning of the Summit Place property following an interlocal agreement that allows the City to control its development. Under the agreement, the County will continue road maintenance and continue to operate its gravel mine and other current facilities until the property is sold. To date, 35 acres of the property have been sold to the Tahoma School District. The City can undertake comprehensive planning for the site, although the County must be informed of any proposal to change the land use or zoning on the property. This allows the County to provide input regarding impacts to its current operations on the property.

The City should take advantage of the County's resources, including its economic development expertise and its knowledge of the property as a result of its long ownership and management of Summit Place. The County cannot only be a willing but a helpful partner in the process of engaging developers through an RFP process and other methods of communication.

Preserve the Legacy Site for a Future Centerpiece Project for the Community

The Legacy site is a 50-acre parcel owned by the City, located on Maple Valley Highway across from the Rock Creek Elementary School complex. It is located near the Lake Wilderness Lodge and Golf Course.

As well, the short-term exigencies of the "fiscal cliff" mean that the City will be in a better position for eventual development of the Legacy site after developing the site(s) discussed above that are more likely to have a larger and quicker payoff.

Given these issues, and with its central location in the City, the IEDC team recommends that the site be considered for a municipal center and with accompanying recreational and general amenities uses. The IEDC team envisions that the City's development options for the site could include a sort of downtown center, sports and recreation facilities, a hotel, or other uses compatible with a municipal center. Such uses can be conceptualized to reflect the brand of the community.



Element 1

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By waiting until the City achieves some economic development successes and its fiscal position is stronger, options for development of the Legacy site could be more flexible, wide-ranging and ambitious. In other words, Maple Valley residents may be more likely to get a more satisfying product on the site in the long run.



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Partner Spotlight: The State of Washington

The State of Washington has a number of resources available to Maple Valley to aid in its economic development strategy and attraction of new businesses to vacant land. The City should actively seek the assistance of the State to avail itself of free resources in economic development before hiring outside consultants.

Workforce Information: The State's Employment Security Department can help with data through various workforce analyses of local employment dynamics for King County, Pierce County, and neighboring jurisdictions. It can also respond to a customized query isolating particular zip codes and/or municipalities.

The department provides these laborshed analyses free of charge. They include analysis of labor force by age, education, industry, NAICS, and SIC code. The department also can help the City utilize resources including the Census Bureau's "On the Map" tool that provides workforce data on employees in Maple Valley and other jurisdictions. (The City itself can go online and use the "On the Map" tool for more detailed economic and demographic information.)

Business Attraction/International Marketing: While the State Department of Commerce assigns many duties related to business attraction to local Associate Development Organizations (for Maple Valley, the EDC-SKC), it does some direct business attraction activities itself, especially in the area of foreign investment. Through its activities with the U.S. Department of Commerce's SelectUSA initiative (to attract foreign direct investment to the U.S.), it represents the inventory of available, industrially zoned parcels to developers and companies representing foreign interests. Maple Valley should keep the department's Business Services Division informed of its vacant parcels in order to take advantage of opportunities that arise as a result of inquiries from foreign companies (especially given the scarcity of large vacant parcels in King County).

Innovation Partnership Zone: The Department of Commerce also operates an Innovation Partnership Zone program, though at this time, Maple Valley is not a strong candidate for the designation. The designation is generally not given to cities until partners are on board and/or innovation is in the pipeline or clearly set for takeoff. (Through the program, 18 communities are designated as "innovation partnership zones" for their achievement in economic development efforts that partner research, workforce training and private sector participation in furtherance of industry cluster development, technology development, and jobs. New zones are designated every two years. The designation does not come with any financial award though it does confer status and help the community compete for other awards.)

Lay the Groundwork for Future Economic Development Success

As the City is just getting started in economic development, the IEDC team has focused the first two sections of its recommendations (sections A and B) on building capacity and on steps it can take toward site development that should pay off in the near term. However, to lay the groundwork for



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the City's longer-term prosperity, the IEDC team recommends that the City continually build capacity around the two main drivers of long-term economic development success: workforce development and entrepreneurship. This section also briefly addresses preparing for redevelopment opportunities.

Leverage Opportunities and Partnerships Around Workforce Development

Largely due to the lack of large employers in Maple Valley and its history as a residential community, the City does not have strong existing relationships with workforce partners.

Yet workforce development is key to any economic development strategy. Access to skilled workers is a top priority for most employers that has become only more critical in recent years. The new Regional Learning and Technology Center presents an exciting opportunity for Maple Valley to partner with secondary and post-secondary educational institutions to become known as a community that values and fosters innovative learning opportunities.

The IEDC team encourages the City to explore ways it can partner with the Tahoma School District, local community colleges, area companies, and workforce and industry groups to optimize preparation of the workforce for advancement into the local and regional economy in living-wage jobs in growth industries. Discussion of the City's opportunities with workforce partners is outlined below.

Tahoma School District

The door to greater workforce involvement on behalf of the City was discussed above in regard to the new Regional Learning Center, which will be a point of pride and an asset that will serve to make the City more attractive to both residents and employers.

Local K–12 schools are increasingly important to a successful workforce development pipeline. Maple Valley is fortunate that it is served by an excellent school system, but looking beyond past success, it is even more fortunate that the Tahoma School District is a nimble organization with innovative, forward-thinking leaders. It aims, with the new high school, to help students be “future ready” for STEM (science, technology, engineering and math) and other fields that require four-year degrees, as well as to provide training in skilled fields for students who are not on a four-year track. The district's grant from the Workforce Development Center is helping it develop readiness skills for careers after graduation.

The City (through the City Council, staff, or Economic Development Committee involvement) should offer its involvement and support to the Tahoma School District to align the planning and programming of the Regional Learning and Technology Center with the workforce needs of the regional business community. For example, the school district is working with Boeing to incorporate the company's material into the curricula for the high school. As the Regional Learning Center is developed, now is an important time to be listening and participating in the conversation that includes local companies, educators, and associations. The City's BRE program will be a useful avenue for documenting employers' workforce skill needs.



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As another example, the school district's high school robotics program is one of the top in the state, presenting an attractive opportunity for companies who may want to work with the school system to provide learning opportunities for students, perhaps locating nearby to do so. In turn, these companies would benefit from the training facilities and worker pipeline.

Post-Secondary Education Institutions

During meetings with the IEDC team, other organizations mentioned as potential partners in the Regional Learning and Technology Center include Green River Community College (GRCC), Renton Technical College, and possibly the University of Washington and Washington State University. The eventual location of a Small Business Development Center office at the Regional Learning Center by GRCC was mentioned as a long-term vision. The City of Maple Valley should explore opportunities to support the involvement of these organizations in the regional employment center.

GRCC appears to be a particularly promising partner for the City. It offers professional technical classes and has the ability to offer college-level information technology classes in areas such as application development and secured networking. These offerings have the potential to be of significant value to students at the Regional Learning Center. Further discussion of GRCC as a partner is included in the section below on entrepreneurship.

The Workforce Development Council of Seattle-King County

The IEDC team believes the City would benefit from increased engagement with the primary local workforce partner, the Workforce Development Council of Seattle-King County (WDC).

The WDC frequently works with the Economic Development Council of Seattle and King County to conduct talent pipeline studies and industry workforce need studies. While the WDC's primary client is the individual job-seeker, it holds regular panels convening companies from various industries to determine their needs and then works with educational institutions to develop a curriculum and training program to meet them. As Maple Valley looks to develop employment centers, the WDC's industry research will be particularly valuable. Much of this information is available on its website, and WDC also works directly with communities to help them get information they need.

The WDC is already involved with the Tahoma School District. The Tahoma School District is one of ten school districts in King County that received a grant under the WDC's "Careers Plus Contract." The one-year, \$32,000 grant commenced in September 2013 and is for the purpose of helping the school district develop curriculum and programs to help students who are destined for a four-year college education, as well as to help those who are not identified and achieve a career path beyond high school.

Foster Small Business Development and Entrepreneurship Opportunities

Entrepreneurship has come to the fore as a key economic development strategy in recent years. As the pipeline for business recruitment prospects has shrunk and globalization affects many existing employers, communities have realized that homegrown businesses are the ones most likely to stay put and grow.



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The IEDC team encourages the City, over the long term, to seek to grow, attract, and support a portfolio of small to medium-sized employers to mitigate risk to the community. In other words, an economy that has 20 businesses of 20 employees each is likely to be healthier in the long run than a community that has one business that employs 400.

In meetings with business and educational stakeholders, it emerged that Maple Valley appears to have a high degree of entrepreneurship in comparison to neighboring communities. This is a special asset for the community that should be nurtured. The City should build upon existing support for business development and seek to add additional resources in the future dedicated to entrepreneurship and business incubation.

However, it is important to stress that entrepreneurship is a long-term strategy. One reason it traditionally has received short shrift in economic development strategies is that its payoff is often well beyond that of local election cycles. Given the current limited capacity of the City as it begins its focus on economic development, the team recommends that the City begin with small steps to build capacity to support entrepreneurs and startup businesses with an eye to ramping up these efforts over the longer term.

Existing Entrepreneurship Initiatives and Partners

The primary organizations providing assistance to small businesses and entrepreneurs in Maple Valley are the Greater Maple Valley-Black Diamond Chamber of Commerce and the Green River Community College Small Business Assistance Center (SBAC).

The Chamber does this primarily through the rental of office suites at its Business Development Center and through linking businesses with legal, land use, finance, and business development experts. The Chamber also arranges for a consultant from the Green River SBAC to provide businesses with technical assistance to develop business plans and grow to become independent or more thriving entities. The SBAC offers counseling sessions, assessment, and resource referrals.

Potential Roles for the City

The City of Maple Valley should support the efforts of the Green River Community College SBAC, now and as the relationship potentially grows. According to the Chamber, the City of Maple Valley currently does not contribute to the funding of the SBAC, while other neighboring municipalities do.

Down the road, Green River Community College has expressed interest in housing a small business development center at the Regional Learning and Technology Center at Summit Place. The IEDC team recommends the City work with the Tahoma School District and Green River Community College to make this project a reality. During interviews, the team also heard discussion of potentially developing an incubator at the Regional Learning and Technology Center site. Incubators are an excellent tool for developing new businesses, but require robust support services and a strong pipeline of potential clients. If a feasibility study eventually indicates that an incubator could succeed in Maple Valley, the team encourages the City to support such an effort.



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The City may also have a role in supporting efforts to incorporate entrepreneurship into the K-16 educational system. This is already an initiative of Green River Community College, which is currently developing a new degree program around entrepreneurship. The inclusion of entrepreneurship into the curriculum and culture at the Regional Learning Center, paired with the future development of a small business development center and incubator, would be key steps in rebranding Maple Valley as a place that caters to and develops entrepreneurship.

Another entrepreneurship support program that the City could consider implementing in the long run, with partners, is economic gardening. Economic gardening is a “grow from within” strategy that targets existing growth companies and offers them critical strategic information customized to their needs. This information can be key to propelling the company to its next phase of growth.

Economic gardening is not about connecting entrepreneurs with support institutions or helping them with their operations, workforce development, or tax credits. It is about leveraging research using sophisticated business intelligence tools and databases that growth companies either aren’t aware of or cannot afford. Research specialists typically assist in four key areas: strategic market research, geographic information systems, search engine optimization, and social media marketing. More information about economic gardening can be found at the website of the Edward Lowe Foundation (edwardlowe.org), which hosts the National Center for Economic Gardening.

In sum, there is a variety of ways the City can get involved with partners to support entrepreneurship in Maple Valley.

Plan for Redevelopment Potential

Though it may be some time before redevelopment is a viable or attractive option for selected commercial areas in Maple Valley, optimizing the potential for redevelopment sooner, rather than later, is an important facet of the City’s economic development strategy.

Zone for Higher Density in Selected Areas

Particularly around the Four Corners area, zoning for higher density would allow buildings that currently face height restrictions to eventually build up, increasing options for mixed-use commercial/office and residential uses. The current 35-foot height limitation on commercially zoned buildings (with 45-foot allowances in some cases) does not facilitate the development of multi-use buildings. Raising the height limit to at least 55 feet (to allow for five-story developments) would allow for a mix of office and/or retail with residential units constructed on separate levels.

Additionally, the IEDC team understands that some underutilized and vacant property exists in other parts of the city, including the northwest quadrant of the Four Corners Area. The City should continue investigating how to optimize development possibilities for economic development in these areas.



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Support Analysis

Support Infrastructure Projects that Benefit Existing Commercial Districts and Vacant Parcels

While understanding the reality of limited dollars for infrastructure, the IEDC team recommends that the City prioritize projects that support imminent economic development opportunities (e.g., the North End). One such project is to create a second northbound lane on SR 169 between Witte Road and 240th Street. This adds to the second southbound lane on SR 169 built last year.

Although mitigation agreements with a future developer could pave the way for some cost-sharing for future road improvement (as YarrowBay had negotiated with the City of Black Diamond in conjunction with a proposed 6,000 residential unit development), infrastructure investment by the City in advance of a developer agreement can help market the site and produce otherwise needed traffic improvements in the meantime.

Traffic improvements in the Four Corners Area also would further efforts to develop the district into a vibrant mixed-use, higher density area in the future.



ECONOMIC DEVELOPMENT

Goals & Policies

INTRODUCTION

The intent of the Economic Development Element is to improve the quality of life by encouraging a greater number and variety of commercial businesses that provide services and create employment opportunities for Maple Valley residents, as well as grow the tax base to take the burden off residential property tax.

The policies in this element address four aspects of creating a healthy economic climate for Maple Valley; quality of life, sustainable revenue sources, opportunities, and partnerships. The policies presented in this element will guide future City initiatives that, together with private sector actions, will produce a strong economy. The results will preserve and improve the quality of life that Maple Valley's residents and workers currently enjoy.

The Economic Development Support Analysis section of this Plan contains background data and analysis, which describe the existing economic conditions of the City, and provide the foundation for the following goals and policies.

GOALS & POLICIES

Goal ED-1: Develop a business retention and expansion program, and support efforts that foster small business development and entrepreneurship.

- Policies:**
- ED-P1.1** Work with the Maple Valley-Black Diamond Chamber of Commerce to establish effective roles for business outreach efforts.
 - ED-P1.2** Support a portfolio of small to medium-sized employers to mitigate risk to community.
 - ED-P1.3** Establish a business retention and expansion program that encourages dialogue with existing non-retail and local service businesses. The program should aim to identify specific issues hindering the growth of both individual businesses and specific industries in order to help them succeed, expand, and create jobs in the City.
 - ED-P1.4** Support business development initiatives of the Maple Valley-Black Diamond Chamber of Commerce, Green River Community College Business Development Center, and similar partners.
 - ED-P1.5** Make entrepreneurship a priority in current and future economic development policy.

Goal ED-2: Develop and promote a culture oriented to economic development in City services and communicate that priority to residents and externally.

- Policies:**
- ED-P2.1** Develop ongoing education programs regarding the benefits of economic



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Goals & Policies

development for the community and deliver it through both formal and informal communication channels.

ED-P2.2 Maximize economic development capacity by enhancing the scope and strategic role of the Economic Development Committee.

ED-P2.3 Develop ongoing relationships with regional and state partners such as the Economic Development Council of Seattle-King County, the Puget Sound Regional Council, King County Government, the State of Washington, and other similar entities in positions to further Maple Valley's economic development interests.

ED-P2.4 Establish an initial point of contact for economic development within the City as well as a team to respond to broader issues and assume specific projects.

Goal ED-3: Utilize an approach to land use, transportation, and infrastructure development that promotes the generation of living-wage jobs and diversifies the City's revenue base.

Policies: **ED-P3.1** Employment Center development should be prioritized over residential uses and community amenities on large, undeveloped parcels, with the exception of the Legacy and Brandt properties.

ED-P3.2 Prioritize development of vacant sites to optimize economic development outcomes in the near term.

ED-P3.3 Utilize zoning of undeveloped sites to allow maximum flexibility for job-creating development and to limit retail and other uses not compatible with an employment center producing living-wage jobs.

ED-P3.4 Employ the zoning code to maximize the economic development potential of existing commercial areas, e.g., by addressing building height and use designations.

ED-P3.5 Prioritize infrastructure projects that are beneficial to sites proposed for office campus, technology, and light/advanced manufacturing development.

ED-P3.6 Support infrastructure projects that are beneficial to existing commercial areas.

ED-P3.7 Pursue opportunities for mixed-use development and higher density development that are compatible with the City's character.

Goal ED-4: Attract family-wage employers to the City in order to diversify the City's revenue base, provide employment opportunities for Maple Valley residents, and increase the City's daytime population.

Policies: **ED-P4.1** Gather and package detailed development data related to specific sites, market analysis, and workforce availability.

ED-P4.2 Build relationships within the regional development community.

ED-P4.3 Develop and release a request for proposals in order to secure a developer for the City's priority parcels for development.



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Goals & Policies

ED-P4.4 Consider tax and service-based incentives to attract development.

Goal ED-5: Build and promote existing and new relationships with workforce development organizations, training providers, and educational institutions to strengthen the City's workforce pipeline and its reputation for skilled workers.

- Policies:**
- ED-P5.1** Participate in the planning and programming of the Regional Education Center.
 - ED-P5.2** Support efforts of the Tahoma School District, Green River Community College, and other workforce partners to work with industry to develop curricula related to industry skill needs, especially in STEM (Science, Technology, Engineering, and Mathematics) education.
 - ED-P5.3** Use data collected on the City and regional workforce to identify other workforce opportunities related to economic development.



Element 2 LAND USE

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LAND USE OVERVIEW

The Growth Management Act (GMA) requires that the Land Use Element of a Comprehensive Plan:

- Designate the proposed general distribution, location, and extent of the uses of land for housing, commerce, industry, recreation, open spaces, general aviation airports, public utilities, public facilities, and other land uses.
- Include population densities, building intensities, and estimates of future population growth.
- Provide for protection of the quality and quantity of groundwater used for public water supplies.
- Consider urban planning approaches that promote physical activity.
- Review drainage, flooding, and storm water run-off in the area and nearby jurisdictions and provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state, including Puget Sound or waters entering Puget Sound.

Through its goals and policies and Future Land Use Map, this element describes the general pattern of land uses that the City intends to achieve its vision for the future.

RESIDENTIAL LAND USES

A key focus of the GMA, and the predominant land use in Maple Valley, is residential. Through the Countywide Planning Policies, Maple Valley has been given a housing target to be accommodated by the Plan. Other GMA provisions relevant to the residential component of the Land Use Element include:

Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock. RCW 36.70A.020(4).

The City's existing residential neighborhoods are overwhelmingly characterized by single-family developments. The goals and policies in this Plan are intended to protect the quality of existing neighborhoods while allowing for a broader range of residential densities in future developments.

Preserving neighborhood quality also means ensuring that adequate water and sewer availability, streets, bike paths, trails, landscaping, storm water drainage, pedestrian access, and park and recreational facilities are provided and maintained. The Plan contains policies intended to establish or maintain these types of development standards.



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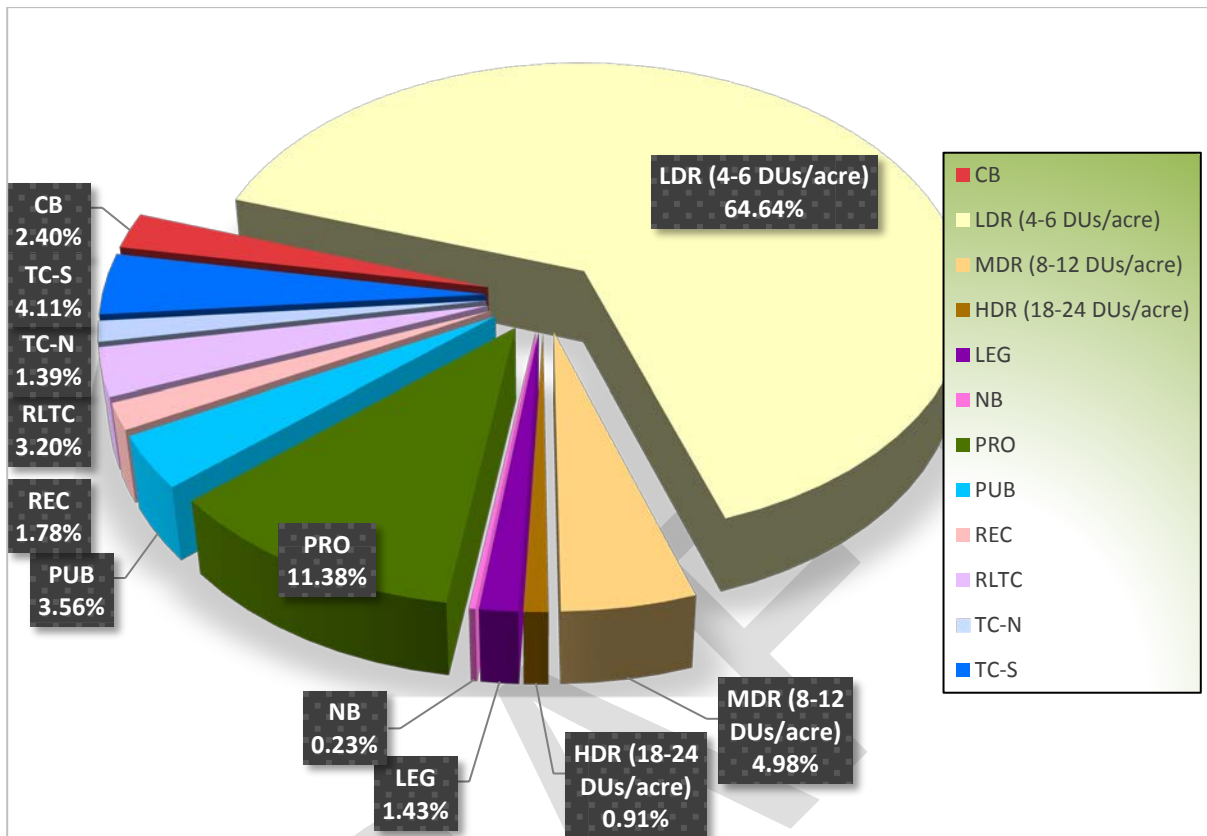


Figure 2.1 – Percentages of Land Use designations on Future Land Use Map

Low Density Residential – Four to Six Units Per Acre

Approximately 65% of the City's land area is designated on the Future Land Use Map for low density residential uses. See Figure 2.7. Land in this classification should continue to be developed at a range of four to six units per acre to maintain compatibility with the existing neighborhoods. Development of attached single-family homes, including townhouses and duplexes is also allowed in these zones, as long as maximum allowed densities are not exceeded.

This designation is appropriate for most land in the planning area suited for residential use, which is in close proximity to similar uses and to collector streets, with direct connections to commercial and recreational areas. These areas should be well served by recreational and open space resources, served by an internal street system and be defined by appropriate neighborhood boundaries, which may be bordered but not penetrated by major arterial roadways.

Medium-Density Residential – Eight to Twelve Units Per Acre

Approximately 5% of the City's land area is designated for medium densities of eight to twelve units per acre. This designation provides for primarily single family detached development, but also allows



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townhouses and duplexes to be interspersed in these areas as long as these densities are maintained. Medium density development allows for a mix of housing types and provides a more affordable alternative to larger lot, single-family detached housing.

Single-family neighborhoods are also typically interspersed with uses such as schools, religious facilities, and day care centers. Locational criteria for these kinds of development include transition areas between higher density multi-family and single-family neighborhoods and transition between single-family neighborhoods and adjacent commercial centers or employment areas. Generally, this designation is appropriate for land located adjacent to principal arterials.

High Density Residential – 18 to 24 Units Per Acre

High density residential is a necessary component of the City's housing mix. It helps the City address its county assigned housing target and provide housing for households who may not be able to afford a home of their own, for transitional households looking for a temporary domicile, as well as many senior households looking to downsize their living space needs.

This designation is appropriate for land which is located adjacent to principal arterials and major highway corridors, served by public transit and in direct proximity to business and commercial activity centers.

COMMERCIAL LAND USES

Regional Employment Center

The Strategic Economic Development Assessment prepared for the City in 2014 identifies several priority areas to be addressed in the Comprehensive Plan Update: Regional Employment Center, Regional Employment and Technology Center, and Legacy Site, a relatively large underdeveloped land, which provides the greatest opportunity and primary priority for achieving the economic development goal of increasing living-wage jobs.



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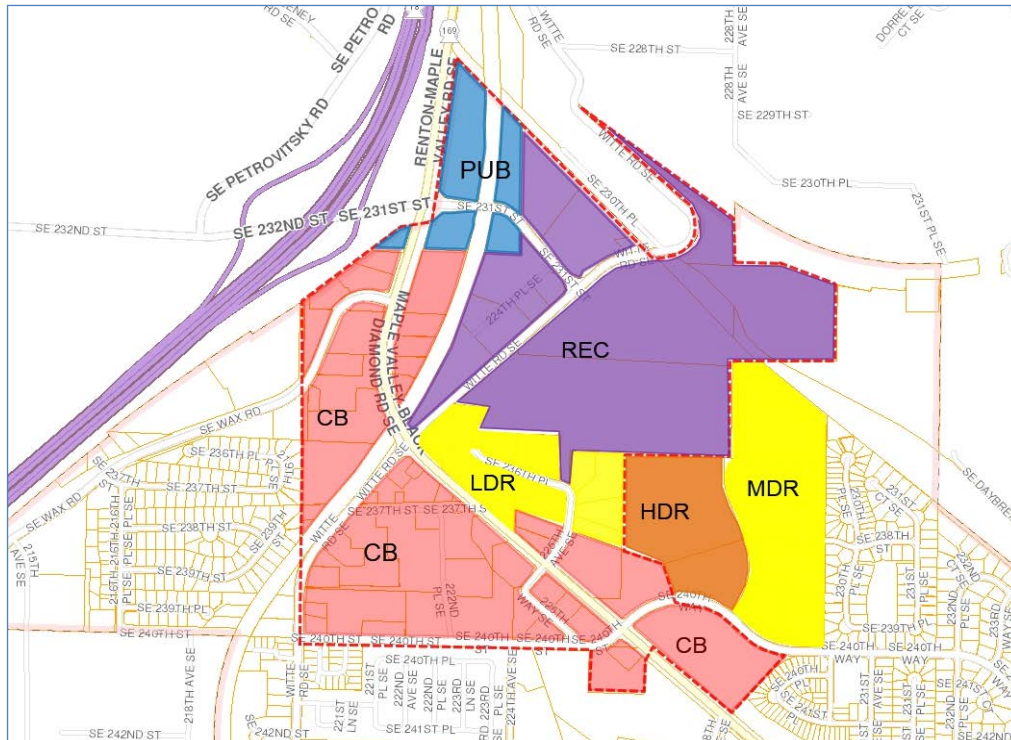


Figure 2.2 – Regional Employment Center within the North Activity Center

The Regional Employment Center (REC), consisting of 69 acres, is located at the north end of the City, in close proximity to SR 18 and SR 169, which provide excellent access to the region's laborshed.

This designation is intended to encourage nonpolluting business uses that do not necessarily rely upon arterial visibility and serve to provide living-wage jobs. Retail commercial and service uses should be encouraged that are oriented to the convenience of workers in the REC rather than the broader community.

The REC should be buffered from adjacent residential properties and characterized by features that can accommodate uses without adversely impacting surrounding residential areas.

Legacy Property

The Legacy Property, consisting of 50 acres is located directly to the north of the Town Center. This City owned property, currently undeveloped, was purchased on August 4, 2000. Located in the center of the City, the Legacy Property offers a unique opportunity to create a focal point, an exceptional civic landmark, and a vibrant meeting place for the whole Maple Valley community.

This designation is intended to encourage civic uses, potential public/private partnerships and commercial activity while providing pedestrian and vehicular connectivity to the adjacent Town Center North.



Town Center North

LU-6



best use over time should morph into a mixed-use, mid-rise building form, (up to five stories in height), with a variety of housing types, commercial, and civic uses.

It will be an area that provides pedestrian and vehicular traffic connections from all four directions. It will be one of the few areas of our city with such connectivity. It will tie retail to the south and civic, public private partnerships and parks in the Legacy Center to the north. It will also be a transitional property from old to new as infill is expected with a variety of timeframes. As an area with safe, attractive, and efficient streets and sidewalks it will be an important addition. A broad avenue with multiple north-south connectors should be encouraged to allow for internal circulation that bypasses Maple Valley Highway. New mixed-use, commercial, and civic developments should be oriented to and connect with this new street system rather than be inwardly focused. The design objectives for Town Center North are connectivity, pedestrian amenities, human scale, distinctive architectural character and environmental sustainability.

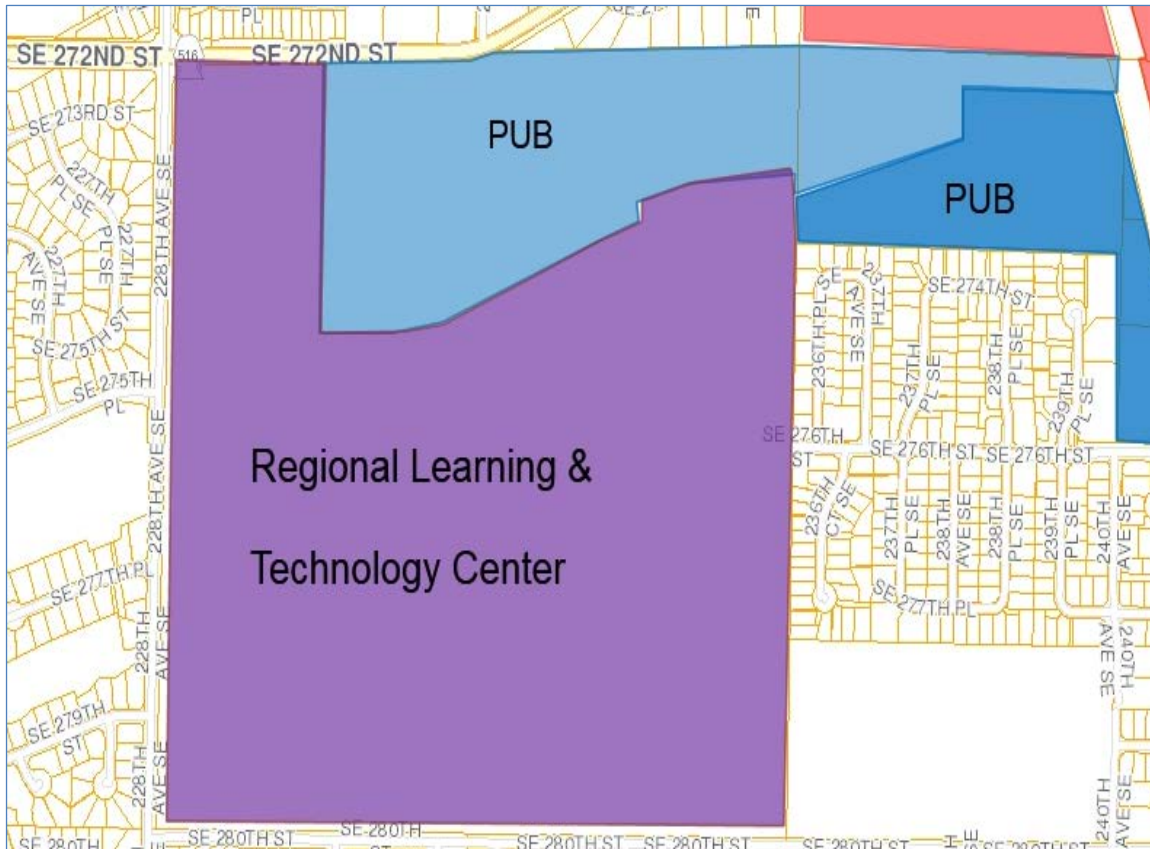
Town Center South

The southern portion of Town Center, focused on the four quadrants of the SR 169/Kent Kanglely intersection, is predominantly low-rise in form and commercial in use. The retail, grocery, restaurant, and service uses concentrated in this area are relatively new and are likely to continue as the primary land use pattern for the next several decades at least.

Primary access to Town Center South is provided by the two state highways, with limited internal public streets, but opportunities for internal circulation between adjacent private parcels. There is also an opportunity to introduce multi-family use as part of either a vertical or horizontal mix for those areas of Town Center South that lack direct access or visibility from SR 169. Densities up to 36 units per acre are appropriate with parking accommodated in either grade level or under structure garages.

Regional Learning and Technology Center

The former Summit property in the South Activity Center is also identified in the Strategic Economic Development Assessment as a high priority.



The Regional Learning and Technology Center (RLTC) should become a hub of educational and work training activities, with a number of institutions and businesses benefitting from co-location on a large campus setting close by the City's emerging Town Center. This proximity will provide synergy between the educational and commerce sectors of the South Activity Center.

This designation is intended to encourage nonpolluting business uses that do not necessarily rely upon arterial visibility and serve to provide living-wage jobs. Retail commercial and service uses should be encouraged that are oriented to the convenience of workers in the RLTC rather than the broader community.

The new Tahoma High School will occupy a portion of the RLTC, with opportunities for other facilities being constructed by Green River Community College and the Renton Vocational Technical College, among others. A master circulation pattern for the entire RLTC will be an important foundation for the segregation and development of individual development sites. Implementing development regulations for the RLTC should include buffer standards adjacent to residential neighborhoods, and the incorporation of an east-west regional trail.



Community Business

Community business centers comprise larger scale and more intensive retail sales and services than found in neighborhood business centers. A broader range of uses are typically found in these areas, including those which typically require outdoor display and/or storage of merchandise, greater parking requirements, and tend to generate noise and traffic impacts as a part of their operations. Such uses include, but are not limited to shopping centers, grocery stores, and restaurants.

Neighborhood Business

Commercial centers within or adjacent to residential neighborhoods serve a useful function in providing convenient access to neighborhood residents for their “everyday” or “convenience” shopping needs. These centers can serve to reduce the number of automobile trips or at least shorten them by providing services near one’s residence. For neighborhood centers to provide these benefits, attention must be paid to ensuring adequate access to these centers from the adjacent neighborhood.

The Neighborhood Business designation is intended to provide for small-scale commercial areas to serve local neighborhoods with a limited range of retail sales and services. Such uses typically include eating and drinking places, professional and personal services, automotive service stations, neighborhood grocery and convenience stores. Residential uses are allowed as secondary uses in Neighborhood Business areas.

This designation is characterized by areas that are served by major arterial streets but are situated in a location that is easily accessible by residents living in nearby neighborhoods. These parcels should be capable of being physically buffered from adjacent residential properties and characterized by soil, drainage and topographic features that can accommodate the construction of commercial areas without adversely impacting surrounding residential areas. Currently there are two areas zoned Neighborhood Business, both located in the southwest portion of the City.

PUBLIC LAND USES

Public Facilities

The City contains a great deal of lands considered useful for public purposes. These include but are not necessarily limited to City-owned or operated administrative and maintenance facilities, school sites, Park and Ride facilities, the Regional Emergency Operations Center, fire stations, the Maple Valley Library, museums, skate board park, the Greater Maple Valley Community Center, and the potential multi-phase community center.

The Growth Management Act requires that jurisdictions develop and adopt a process for identifying and siting essential public facilities. The GMA defines essential public facilities as facilities that are



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typically difficult to site because they are locally unpopular, such as airports, state education facilities and state or regional transportation facilities, state and local correctional facilities, housing for sex offenders, solid waste handling facilities, and in-patient facilities, including substance abuse facilities, mental health facilities and group homes. The GMA states that no Comprehensive Plan or development regulation may preclude the siting of essential public facilities.

Essential public facilities support the needs of the metropolitan region. As the limits of land supply are recognized, governments must exercise care in making fair decisions on locating new or expanding existing essential public facilities. The Office of Financial Management maintains a list of those essential state public facilities that are required or likely to be built within the next six years. The plan contains policies that identify and support the siting process.

Park, Recreation, Open Space

Park, Recreation, and Open space land is beneficial for a wide variety of purposes: active or passive recreation, trails, critical areas protection, natural resources lands, view corridors or urban buffers. The GMA establishes the following planning goal concerning open space and recreation: *“Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.”*

Open space lands comprise both public and private lands that are valued for their open space resource. Many are public such as Lake Wilderness Park, the Lake Wilderness Arboretum, and Lake Wilderness Trail. Others are private but provide a public open space and environmental protection benefit such as private parks within subdivisions, golf courses, and the wetlands associated with the former Elk Run Golf Course. The City is actively pursuing additional park and recreation sites and facilities whether they are within city limits or within areas that may be suitable for future annexation – especially in the southern portion of the City. When completed they are intended to be given this designation, but not in advance of their acquisition by the City.

Recreation uses may include activities that occur within structures and do not have an open space component. Privately owned open space lands may be operated as for-profit entities with special purpose recreation facilities, such as ice arenas, swimming pools, golf courses or live performance theaters. Secondary commercial uses may be allowed in conjunction with these facilities including eating and drinking establishments, small conference facilities and associated retail.



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LAND USE

Goals & Policies

INTRODUCTION

Land use describes the human use of land and involves modification of the natural environment into the built environment and management of these interrelated systems. Land use designations delineate a range of potentially appropriate zoning categories, and more broadly define standards for allowable uses and intensity of development. The combination and location of residential neighborhoods, commercial activity centers, schools, and other uses is important in determining the character of Maple Valley. The pattern of how property is designated in different parts of the City directly affects quality of life in regard to recreation, employment opportunities, environmental and physical health, property values, safety, and other important factors.

This element contains the goals and policies necessary to support the City's responsibility to manage land use and to implement development regulations, guidelines, and programs. The Land Use policies contained in this element, along with the Comprehensive Plan Map, identify the intensity of development and density recommended for each area of the City. These designations help to achieve the City's vision by providing for sustainable growth.

The Land Use Element Support Analysis section of this Plan contains the background data and analysis that describe the physical characteristics of the City, and provides the foundation for the following goals and policies.

GOALS & POLICIES

Goal LU-1: Implement Maple Valley's Vision consistent with the Growth Management Act, the Vision 2040 Regional Growth Strategy, and the King County Countywide Planning Policies (KCCPPs).

Policies:

- LU-P1.1** Assure that the Future Land Use Map and land use policies are internally consistent with and are supported by all other Plan Elements.
- LU-P1.2** Promote the advantages of the City's location at the leading edge of the southeast metropolitan urban growth area, with transportation linkage to SeaTac, Boeing Field, 1-5 North/South, I-90 East and 1-405 North by SR 18, SR 169 and SR 516.
- LU-P1.3** Meet the 2035 household growth targets assigned to Maple Valley by the King County Countywide Planning Policies (KCCPPs).

Goal LU-2: Develop a Land Use Pattern that fulfills the Vision of the City's Future.

LAND USE

Goals & Policies



- Policies:**
- LU-P2.1** Increase the City's jobs to housing ratio to strengthen the tax base.
 - LU-P2.2** Adopt commercial, mixed-use, residential and institutional land use designations that carry forward the economic development objectives set forth in the Vision Framework Goals and Policies and the Economic Development Element.
 - LU-P2.3** Show the distribution, location, and physical extent of the land use designations on the Future Land Use Map.

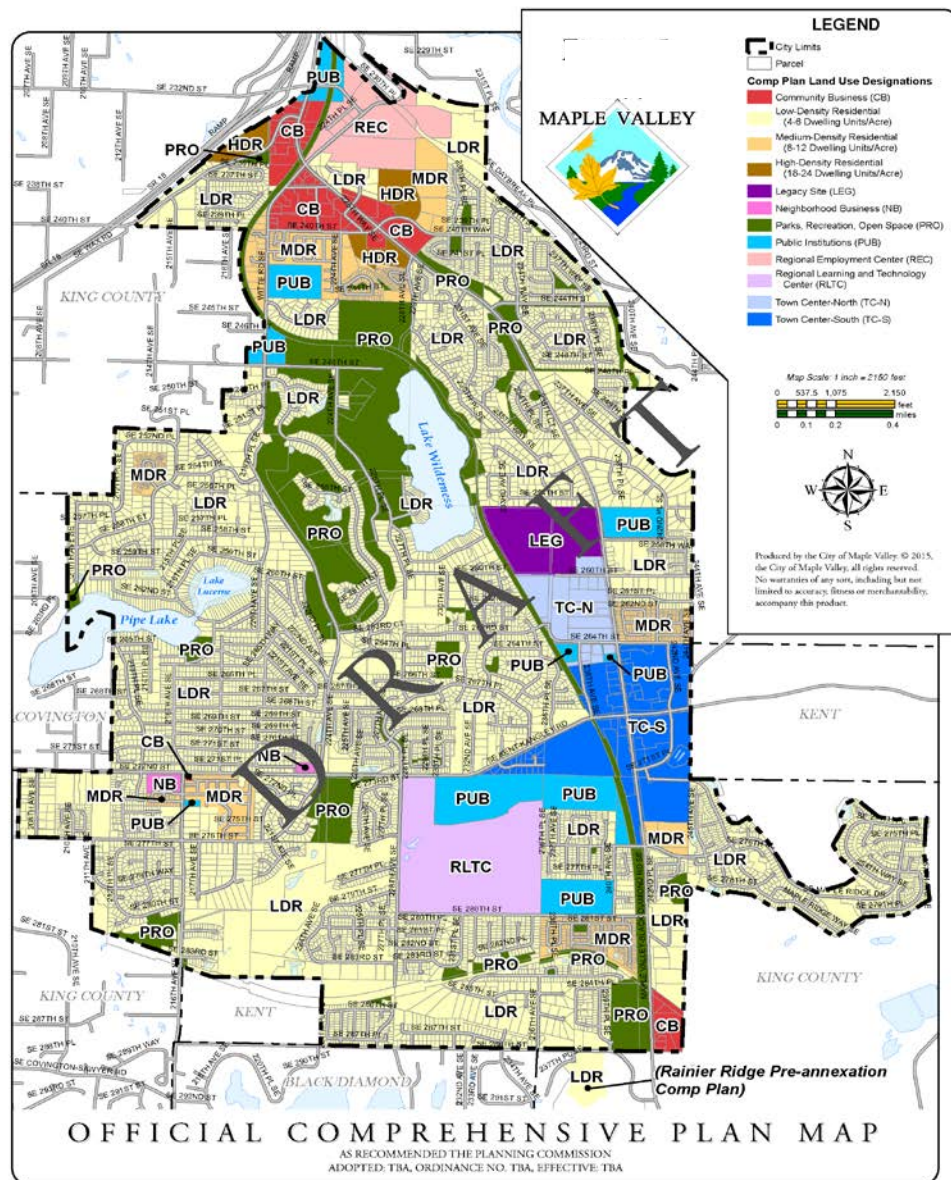


Figure 2.5 - Official Comprehensive Plan Map



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LAND USE

Goals & Policies

<u>LAND USE DESIGNATION</u>	<u>ALLOWED DENSITIES</u>	<u>IMPLEMENTING ZONING</u>
Low Density Residential (LDR)	4-6 units/acre	R-4, R-6
Medium Density Residential (MDR)	8-12 units/acre	R-8, R-12
High Density Residential (HDR)	18-24 units/acre	R-18, R-24
Parks/Recreation/Open Space	-	PRO
Regional Employment Center	-	SC1*
Regional Learning and Technology Center	-	SC2*
Town Center (North & South)	24-36 units/acre	CC* (North) CB* (South)
Community Business	24-36 units/acre	CB
Neighborhood Business	-	NB
Legacy Property	-	CC

Figure 2.6 – Land Use Designations

* Indicates need for zoning text revision per planning policy direction

Goal LU-3: Protect the scenic beauty, water quality, wildlife habitat areas, open spaces, and cultural resources that contribute to the Maple Valley quality of life.

Policies:

- LU-P3.1** Environmental standards for urban development should emphasize flexible development options to allow maximum permitted densities on the parts of the site that are not environmentally constrained.
- LU-P3.2** Measures should be utilized to serve multiple purposes, such as drainage control, ground water recharge, stream protection, open space, cultural and historic resource protection, and landscaping.
- LU-P3.3** Work with private organizations and service clubs to encourage the development of special purpose recreation facilities (e.g., ice arenas, swimming pools, golf courses, live performance theaters, etc.).
- LU-P3.4** The City's development regulations shall include provisions that adequately consider the development of publicly and privately owned recreation space.

Goal LU-4: Promote economic vitality, enhanced goods and services and job creation opportunities in all commercial districts.



LAND USE

Goals & Policies

Policies:	LU-P4.1	Utilize an approach to land use, transportation, and infrastructure development that promotes the generation of living-wage jobs and diversifies the City's revenue base. (VFP 4.2)
	LU-P4.2	Attract living-wage employers to the City in order to diversify the City's revenue base, provide employment opportunities for Maple Valley residents, and increase the City's daytime population.
	LU-P4.3	The size of retail commercial centers in the Community Business and Town Center districts should be scaled and configured to serve the needs of the City and the primary market area that extends beyond the city limits.
	LU-P4.4	The size of retail commercial centers in the Neighborhood Business districts should be scaled and configured to serve the needs of the immediate environs.
	LU-P4.5	Encourage redevelopment and development of underutilized and vacant land compatible with the City's vision for the scale, character, and use mix of the surrounding area.



Goal LU-5: Promote infill development in the North Activity Center.

Sub-Policies:	LU-P5.1.1	Prioritize transportation improvements to SR 18 and SR 169 to support development of lands closest to the intersection of those two state highways.
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LU-P5.1.3 Require this area's overall grading, internal circulation, and linkages to the surrounding road network to be reviewed and approved with the City's development process.



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LAND USE

Goals & Policies

- Policies:**
- LU-P5.2** Promote infill of the established commercial land use pattern in the balance of the North Activity Center.
 - Sub-Policy: LU-P5.2.1** Enable multi-family residential development at a density of 36 units per acre as part of mixed-use development that has access to arterials.
 - Policies:**
 - LU-P5.3** Retain the R6 designated hill immediately east of SR 169 in its present low density residential designation.
 - LU-P5.4** Create a new pattern of high density and medium density residential south of the Regional Employment Center.

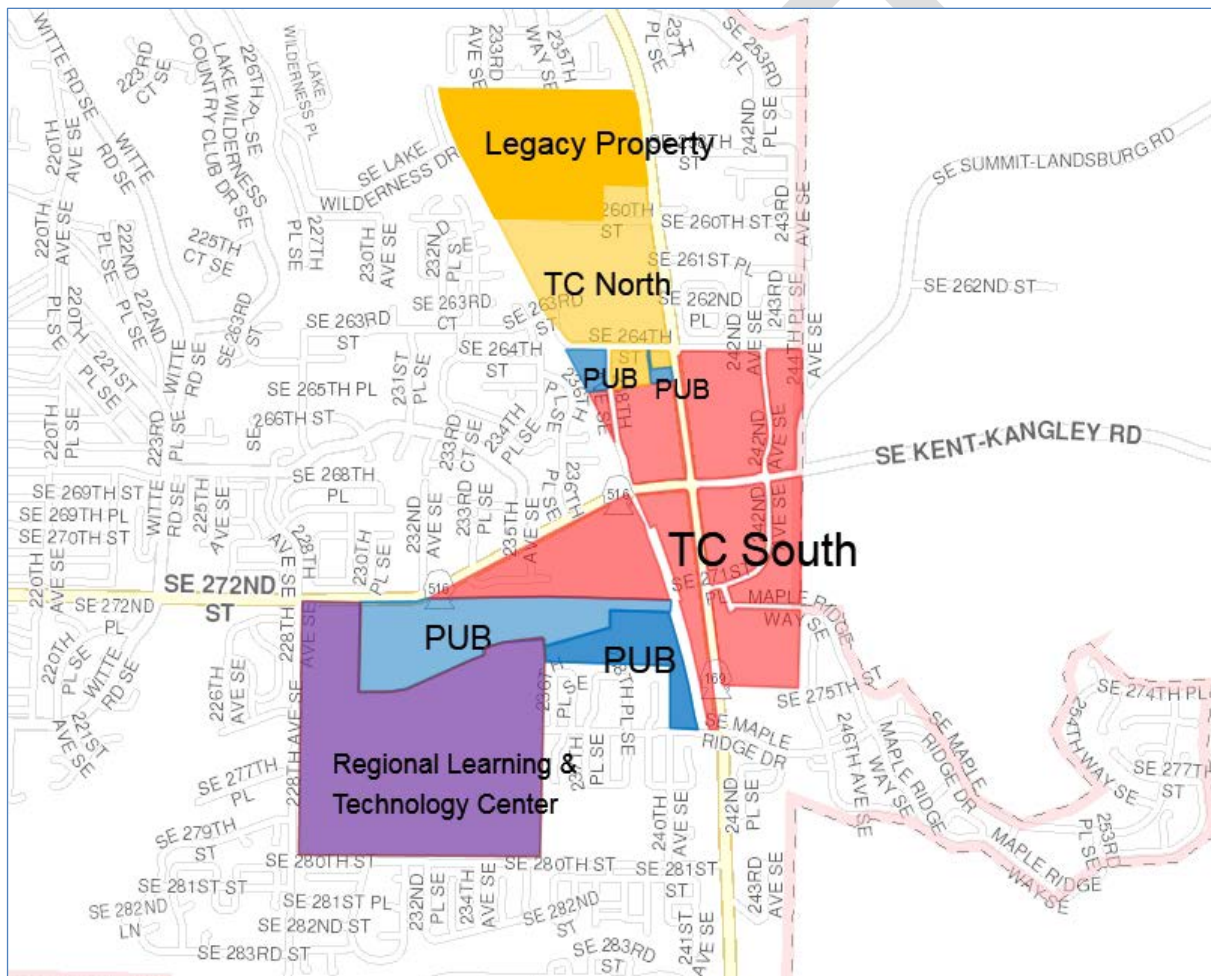


Figure 2.8 - South Activity Center

South Activity Center

- Goal LU-6:** Concentrate major new commercial, residential, civic, educational, and workforce training opportunities in the South Activity Center.



Legacy Property

Goal LU-7

Create a primary gathering place on the Legacy property that is a focal point, an exceptional civic landmark, and a vibrant meeting place for the whole Maple Valley community. Additionally, enhance the identity of the City of Maple Valley and distinguish the image of the City within the Puget Sound region. (VFP 5.1)

Policies:

- LU-P7.1** Ensure an active pedestrian environment. Provide bicycle and pedestrian connections to regional trails, nearby natural areas and public uses as well as adjacent residential and activity centers.
- LU-P7.2** Provide vehicle and pedestrian connectivity and pedestrian amenities connecting to Town Center North.
- LU-P7.3** Seek to provide distinctive architecture scale that complements the environment and an inspirational design that ties together the entire site.
- LU-P7.4** Consider public/private partnerships with a vision for commercial uses at the site. A public/private partnership could take many forms, including shared facilities, land leases, infrastructure support, financial incentives, special entitlement procedures (e.g., tax abatement), and many more.
- LU-P7.5** Reflect the unique character of the environment. Implement design that emphasizes the Northwest wilderness and spirit of adventure that typifies the area.
- LU-P7.6** Encourage infill development by public investment incentives in facilities such as a performing arts center, permanent public market space, daycare facilities, and community centers.
- LU-P7.7** Encourage opportunities for informal community gathering through streetscape design and landscape standards in the Town Center.
- LU-P7.8** Assist in the formation of plazas, exterior terraces, and promenades to expand the range of cultural activities and opportunities that is recognized as a place that attracts the whole community.



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Goals & Policies

Goal LU-8: Create a Town Center.

Policies: **LU-P8.1** Include commercial, retail and other uses to develop mutually beneficial relationships that enhance and support adjacent, on-site public uses. Additionally, consider uses that generate revenue for the City of Maple Valley or that stimulate appropriate private development on adjacent property. (VP 5.2)

Sub-Policies:

- LU-P8.1.1** Provide bicycle and pedestrian connections to regional trails, nearby natural areas, and public uses as well as to adjacent residential and activity centers. (VFP 5.3)
- LU-P8.1.2** Use investments in public facilities as a catalyst to private investment in mixed-use and residential components of the Town Center. (VFP 5.4)
- LU-P8.1.3** Encourage residential development in vertically mixed-use buildings outside of the Legacy Property.
- LU-P8.1.4** Require grade level parking lots to be in the rear or side yards of properties in Town Center, rather than in the front.
- LU-P8.1.5** Reflect the unique character of the environment. Implement design that emphasizes the Northwest wilderness and spirit of adventure that typifies the area.



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LAND USE

Goals & Policies

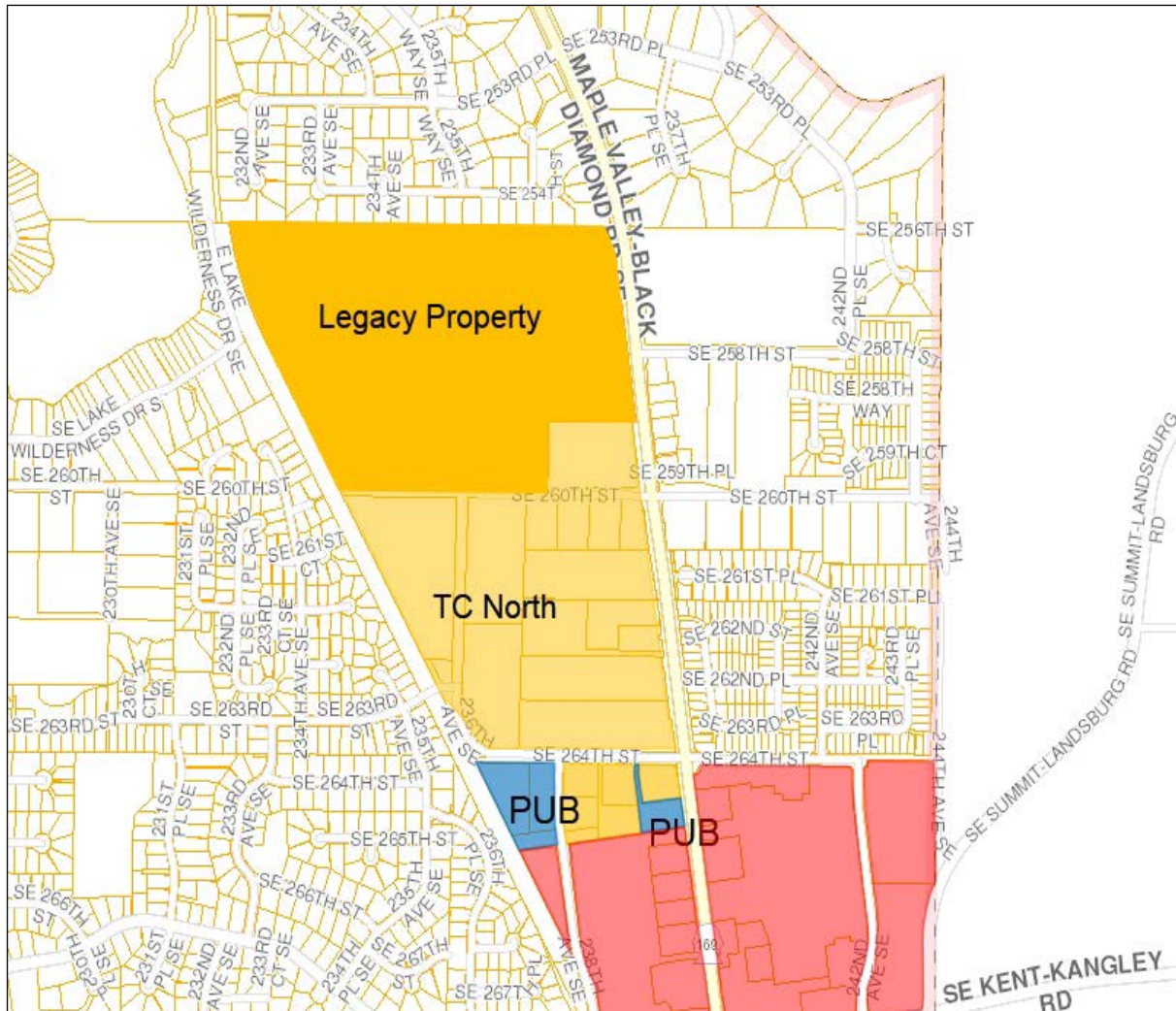


Figure 2.9 – Town Center North

Town Center North

Policies: LU-8.2

Town Center North, currently with a largely underdeveloped and under-utilized land use pattern, should develop over time focused on a roadway network and sidewalk network, a mid-rise building form (up to five stories) and a combination of commercial, residential and civic uses.

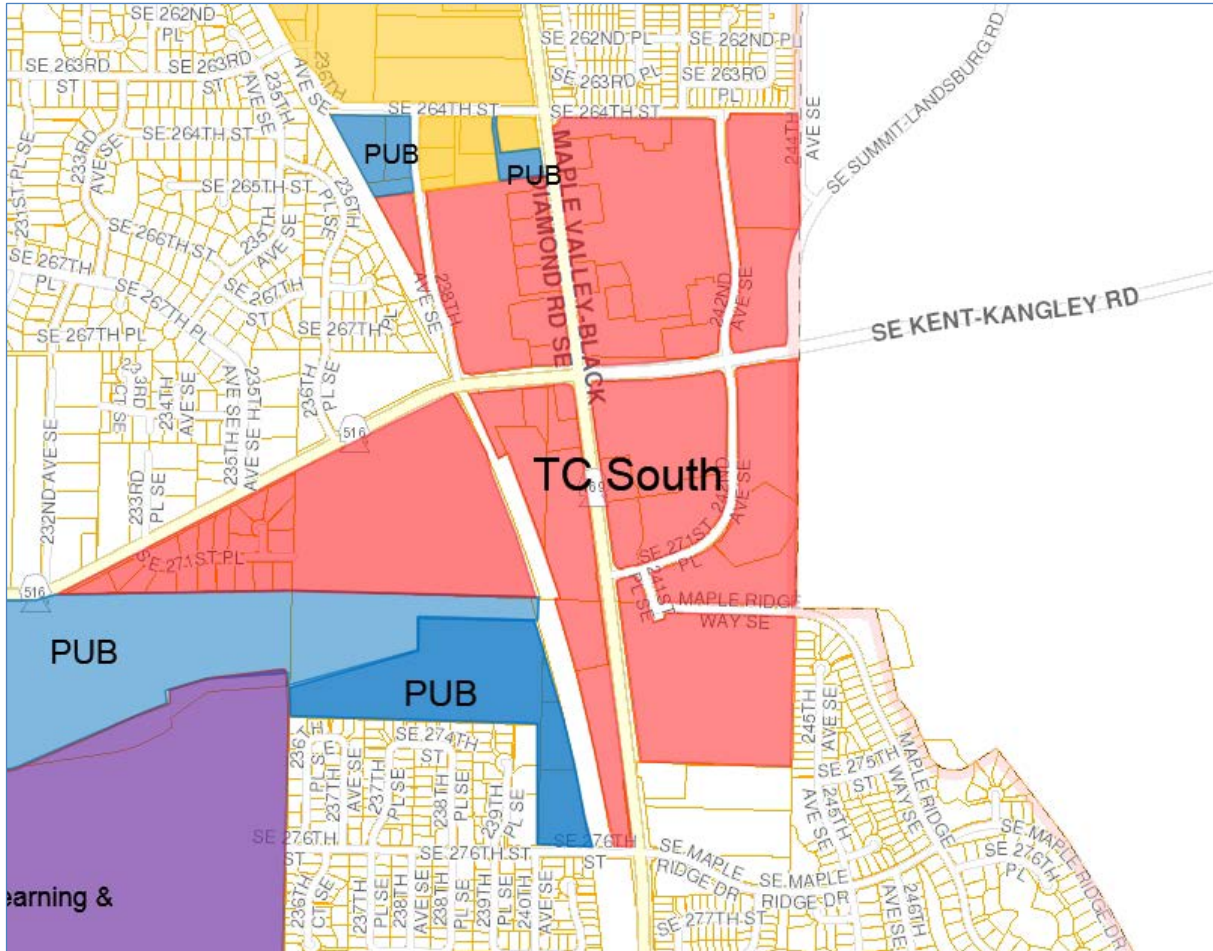
Sub-Policies:

LU-P8.2.1

Adopt development regulations and standards that enable a transition over time, clearly listing current uses as conforming permitted uses, which may continue until the owners wish to convert the land to more dense or intense land uses. (VFP 8.3 applied)



- LU-P8.2.2** Promote an active pedestrian environment by encouraging ground floor retail uses.
- LU-P8.2.3** Consider development incentives including a property tax exemption program to stimulate construction of mid-rise, mixed-use projects with a required percentage of senior or affordable rate apartments.
- LU-P8.2.4** Create a roadway network of streets, sidewalks and pedestrian amenities within the Town Center that connects to the surrounding streets and walkways.
- LU-P8.2.5** Require major retail building entrances, windows, balconies, and outdoor public/private spaces to be oriented to the street frontages rather than the rear or side yards of properties.
- LU-P8.2.6** Wherever possible, encourage building façades forward to the back of the sidewalk.
- LU-P8.2.7** Coordinate with landowners on time horizons for development.
- LU-P8.2.8** Offer incentives for aggregating properties to encourage a multimodal public roadway to accommodate non-motorized uses, parking and vehicular uses between Town Center North and the Legacy Property
- LU-P8.2.9** Require that all frontage along Maple Valley Highway include a commercial component.
- LU-P8.2.10** If vehicular traffic is limited in horizontal mixed use projects, bollards or similar devices shall be utilized to encourage pedestrian passage.
- LU-P8.2.11** Horizontal mixed use shall include a commercial component.



Town Center South

Town Center South, currently with a strong, well-established low-rise, commercial pattern, should infill over time with buildings up to five stories in height and multi-family uses.

LU-P8.3.1 Encourage the long-term development of an internal street network, consisting of either public rights-of way or private easements across the parking lots of adjacent properties.

- LU-P8.3.2** Enable the development of both horizontal and vertical mixed-use development at a density of up to 36 units per acre.



Regional Learning and Technology Center

Goal LU-9: Establish a Regional Learning & Technology Center (RLTC) on the former Summit Place site.

- Policies:**
- LU-P9.1** Recognize and engage the neighborhood, the City, and the region in supporting the important role that the RLTC plays for the Maple Valley community, its residents, and businesses.
 - LU-P9.2** Seek partnership opportunities with and among the Tahoma School District, Green River Community College, Renton Vocational Technical College, Chamber of Commerce, and other institutions and businesses that would benefit from the synergy of co-locating their facilities in close proximity to one another at the RLTC.
 - LU-P9.3** Take the lead in working with King County, current and potential future institutions and businesses at the RLTC to create a Master Plan to lay out vehicular, pedestrian, and bicycle circulation within the RLTC and connecting to the surrounding network of serving trails and roads.
 - LU-P9.4** Encourage the creation of housing at the RLTC for students, trainees, or workers engaged in the goals of the RLTC.
 - LU-P9.5** Create a new zoning designation to identify and facilitate the types of uses that are most appropriate with the goals of the RLTC, including appropriate buffers adjacent to residential areas, lighting, noise, and other appropriate impact mitigation measures.

Goal LU-10: Protect and enhance the character of existing single-family neighborhoods. (VFP 2.3)

- Policies:**
- LU-P10.1** Use innovative land use techniques such as “density averaging” and/or “clustering” to preserve open space and allow more efficient land use patterns. Emphasis should be placed on using these techniques when developing single-family residential uses.
 - LU-P10.2** Common wall and zero lot line, single-family development shall be considered in areas that are: (a) transitional between single-family and higher density or intensity areas; (b) located in residential zoning of 4 to 12 units per acre; and (c) located in mixed-use areas.
 - LU-P10.3** Recognize the unique constraints and opportunities for the lands at the former Elk Run Golf Course by clustering new common wall or zero lot line single-family housing away from lands that are beneath power lines or are environmentally constrained.



- LU-P10.4** Secure public access to the existing east-west trail that traverses the Elk Run site and connect it to a future trail extension across the Regional Learning & Technology Center to intersect with the north-south trail in Town Center.
- LU-P10.5** Evaluate the potential benefits and drawbacks to the City and surrounding properties of securing public ownership of the open space and sensitive lands at Elk Run, including the riparian corridor along Cranmar Creek.
- LU-P10.6** Where commercial development abuts residential neighborhoods, retain a buffer and adopt standards to limit the height of structures and provide for setbacks from property lines.

Goal LU-11: Provide a physical environment that enables residents to incorporate physical activity into their daily lives. (VFG 7)

- Policies:**
- LU-P11.1** Design, develop and enhance parks, trails, open spaces, and recreational facilities. (VFP 7.1)
 - LU-P11.2** Design new mixed-use and multi-family projects to maximize pedestrian and bicycle access and amenities onsite and connectivity to nearby sites, walkways and trails. (VFP 7.2)
 - LU-P11.3** Promote neighborhood connectivity with existing and planned road and trail systems.
 - LU-P11.4** Support safe walking and bicycling routes to schools.

Goal LU-12: Establish a land use pattern than uses land efficiently, facilitates a multi-modal transportation system, and promotes the efficient provision of public services and facilities.

- Policies:**
- LU-P12.1** Concentrate jobs and new housing wherever possible to improve walkability, access to transit and bike trails.
 - LU-P12.2** The City should coordinate with water and sewer districts to ensure that adequate water and sewer capacity exists or is proposed within the respective District's capital facilities plan to support development in the City.

Goal LU-13: Honor Maple Valley's history.

- Policies:**
- LU-P13.1** Encourage the protection, preservation, recovery, and rehabilitation of significant archaeological resources and historic sites.
 - LU-P13.2** Consider the impacts of new development on historical resources as part of its environmental review process.
 - LU-P13.3** Encourage efforts to rehabilitate sites and buildings with unique or significant historic characteristics.



- LU-P13.4** Encourage the incorporation of open space into the design and preservation of historic properties.
- LU-P13.5** Coordinate with the Maple Valley Historical Society regarding its future visions and plans.
- LU-P13.6** Reflect the pioneering history of Maple Valley in its civic architecture and conform to the City's design standards.

Goal LU-14: Administer a process for siting essential public facilities that protects Maple Valley's interests while being consistent with the provisions of the Growth Management Act.

- Policies:**
- LU-P14.1** King County, the City and neighboring cities, and special purpose districts, if advantageous, should share essential public facilities to increase efficiency of operation.
 - LU-P14.2** King County and the City should ensure that no racial, cultural or class group is unduly impacted by essential public facility siting or expansion decisions.
 - LU-P14.3** King County and the City should strive to site essential public facilities equitably countywide. No single community should absorb an undue share of the impacts of essential public facilities. Siting should consider environmental equity and environmental, technical and service area factors.
 - LU-P14.4** A facility may be determined to be an essential public facility if it has one or more of the following characteristics:
 - a. The facility meets the Growth Management Act definition of an essential public facility.
 - b. The facility is on a State, County or local community list of essential public facilities.
 - c. The facility serves a significant portion of the County or metropolitan region or is part of a Countywide service system.
 - d. The facility is difficult to site or expand.
 - LU-P14.5** Siting proposed new, or expansions to existing, essential public facilities should consist of the following:
 - a. An inventory of similar existing essential public facilities, including their locations and capacities.
 - b. A forecast of the future needs for the essential public facility.
 - c. An analysis of the potential social and economic impacts and benefits to jurisdictions receiving or surrounding the facilities.
 - d. An analysis of alternatives to the facility, including decentralization, conservation, demand management, and other strategies.



Element 2

LAND USE

Goals & Policies

- e. An analysis of alternative sites based on siting criteria developed through an inter-jurisdictional process.
- f. An analysis of environmental impacts and mitigation.
- g. Extensive public involvement.

Goal LU-15: Facilitate annexations within the City's Potential Annexation Area.

- Policies:**
- LU-P15.1** Update the Future Land Use Map to reflect the designation by King County of the Rainier Ridge Urban Growth Area Expansion and Potential Annexation Area designation.
 - LU-P15.2** Consider annexation of three parcels to the north of the existing city limits that are identified as PAA under King County Urban Growth maps.
 - LU-P15.2** Upon the annexation of any PAA into the City, amend the Future Land Use Map to reflect the appropriate land use designation.
 - LU-P15.3** Monitor King County policy regarding urban growth area expansions and future land uses within the rural area within the City's primary market area.

Goal LU 16: Promote access to healthy food resources for all residents through opportunities for urban agricultural activities, such as farmers markets, farm stands, community supported agriculture CSA drop-off sites, community gardens, pea patches, school gardens, home gardens, and urban farms.

- Policies:**
- LU 16.1** Establish development regulations that allow for healthy food resources as a permitted use and provide for on-site sale and delivery of healthy foods, on public and private property, where appropriate.
 - LU 16.2** Encourage and support the use of public lands for urban agricultural activities by establishing criteria for assessing suitable sites.
 - LU 16.3** Where appropriate, support joint-use agreements for publicly or privately owned sites for uses such as urban farms, community gardens, and pea patches.
 - LU 16.4** Consider development incentives, grants, and other funding sources to support development of urban agriculture sites and programming.



Element 3
HOUSING

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HOUSING OVERVIEW HO-2
GOALS & POLICIES HO-15



HOUSING OVERVIEW

This Housing Element consists of goals and policies to guide City actions to address housing issues in Maple Valley for the coming twenty years. These steps are intended to ensure the vitality of the existing residential stock, estimate current and future housing needs, and provide direction for programs needed to satisfy those needs as required by the goals and requirements of the Growth Management Act (GMA) and adopted regional policies.

The housing goal stated in the GMA is to:

“Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.”

The GMA’s requirement for “external consistency” means that each city’s comprehensive plan, including its Housing Element, must satisfy the requirements of adopted countywide planning policies (CPPs) and multi-county planning policies (MPPs). The GMA, King County CPPs, and Vision 2040 MPPs (adopted by the Puget Sound Regional Council) encourage the use of innovative techniques to meet the housing needs of all economic segments of the population, and require that the City provide opportunities for a range of housing types.

The GMA also requires an inventory and analysis of existing and projected housing needs as part of the housing element. Assessing local housing needs provides jurisdictions with information about the local housing supply, the cost of housing and the demographics and income levels of the community’s households. This information on current and future housing conditions provides the basis for the adoption of effective housing policies and programs.

The King County CPPs build on the GMA requirement with a number of specific policies. CPP H-1 provides:

“Address the countywide need for housing affordable to households with moderate, low and very-low incomes, including those with special needs.

The countywide need for housing by percentage of Area Median Income (AMI) is:

50-80% of AMI (moderate)	16% of total housing supply
30-50% of AMI (low)	12% of total housing supply
30% and below AMI (very-low)	12% of total housing supply



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Figure H-1 puts Maple Valley’s existing (2015) housing supply into the context of countywide need. Using Area Mean Income (AMI) as the measurement, we see that Maple Valley has a higher percentage of households with an AMI above moderate (73.1) compared to the county as a whole (60%). Almost 94% of Maple Valley households are either moderate or above moderate income, compared to 76% countywide.

% of Area Mean Income		Countywide Households	Maple Valley Households
80---120% of AMI	Above moderate Income	60%	73.1%
50---80% of AMI	Moderate income	16%	20.8%
30---50% of AMI	Low income	12%	3.0%
20% of AMI & below	Very-low income	12%	3.1%
	TOTAL	100%	100%

Figure H-1 – Household incomes countywide and in Maple Valley



Element 3
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Just as Maple Valley is a relatively new city, its housing stock is also relatively new. Over 70% of all existing housing in Maple Valley was built in 1990 or later. If the decade of the 1980's is included, the % increases to over 86%. See Figure H-2.

Year constructed	# of units built	% of units built		
1939 or earlier	121	1.4	30%	14%
1940 to 1959	102	1.3		
1960 to 1979	992	11.2		
1980 to 1989	1,398	15.8	70%	86%
1990 to 1999	2,303	26		
2000 to 2009	3,615	41		
Built 2010 or later	282	3		
Total Housing Units	8,823	100%	100%	100%

Figure H-2 – Age of existing housing stock in Maple Valley

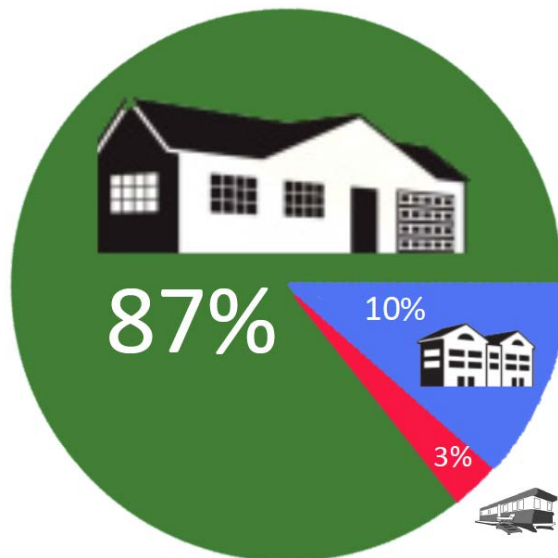


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Data from the American Community Survey shows that the great majority of the City's current housing stock (over 87%) is single-family detached housing, while multi-family and mobile homes are a much smaller portion of existing housing. See Figure H-3.

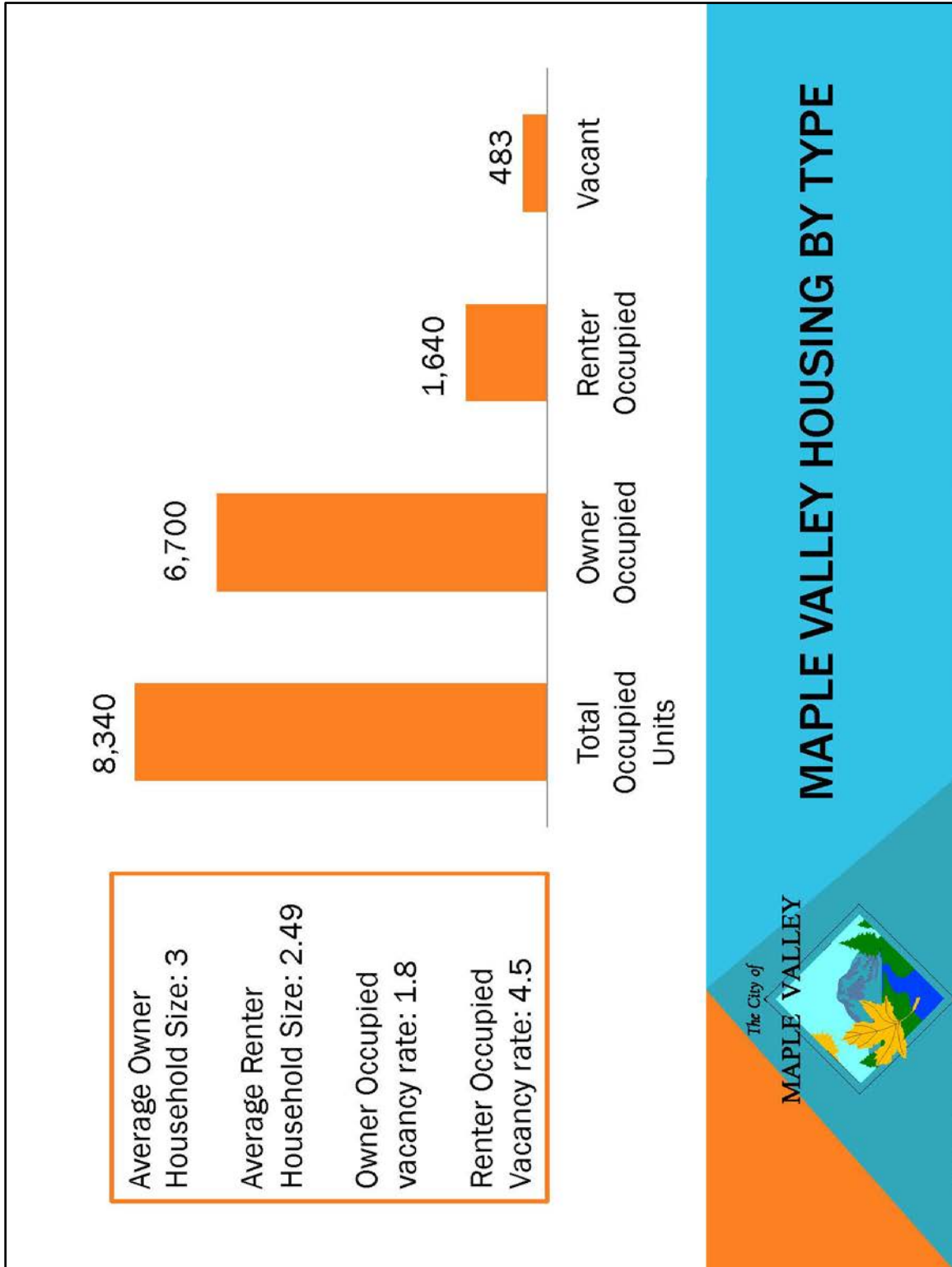


Housing Form	# of units in this form	% of city total in this form
Single-family detached	7,702	87.3%
Multi-family units	876	9.9%
Mobile Homes	245	3%
Total	8,823	100%

Figure H-3 – Existing housing forms in Maple Valley

This information brings into focus the need to increase opportunities for housing for low income and very-low income households. The City participates in an inter local agreement with the Sound Cities Association to provide Housing and Urban Development funds for the most needy in our communities on an ongoing basis. The City of Maple Valley, by itself does not qualify for assistance from HUD funds. Increasing the housing stock accessible to these lower income households is consistent with the City's priorities for being a multi-generational community and enabling service sector employees who work in Maple Valley to also be able to live here. That, in turn, would reduce commute vehicle traffic into the City.

The housing element goals and policies of this Plan identify the steps that the City of Maple Valley will be taking to address these statutory and regional policies.

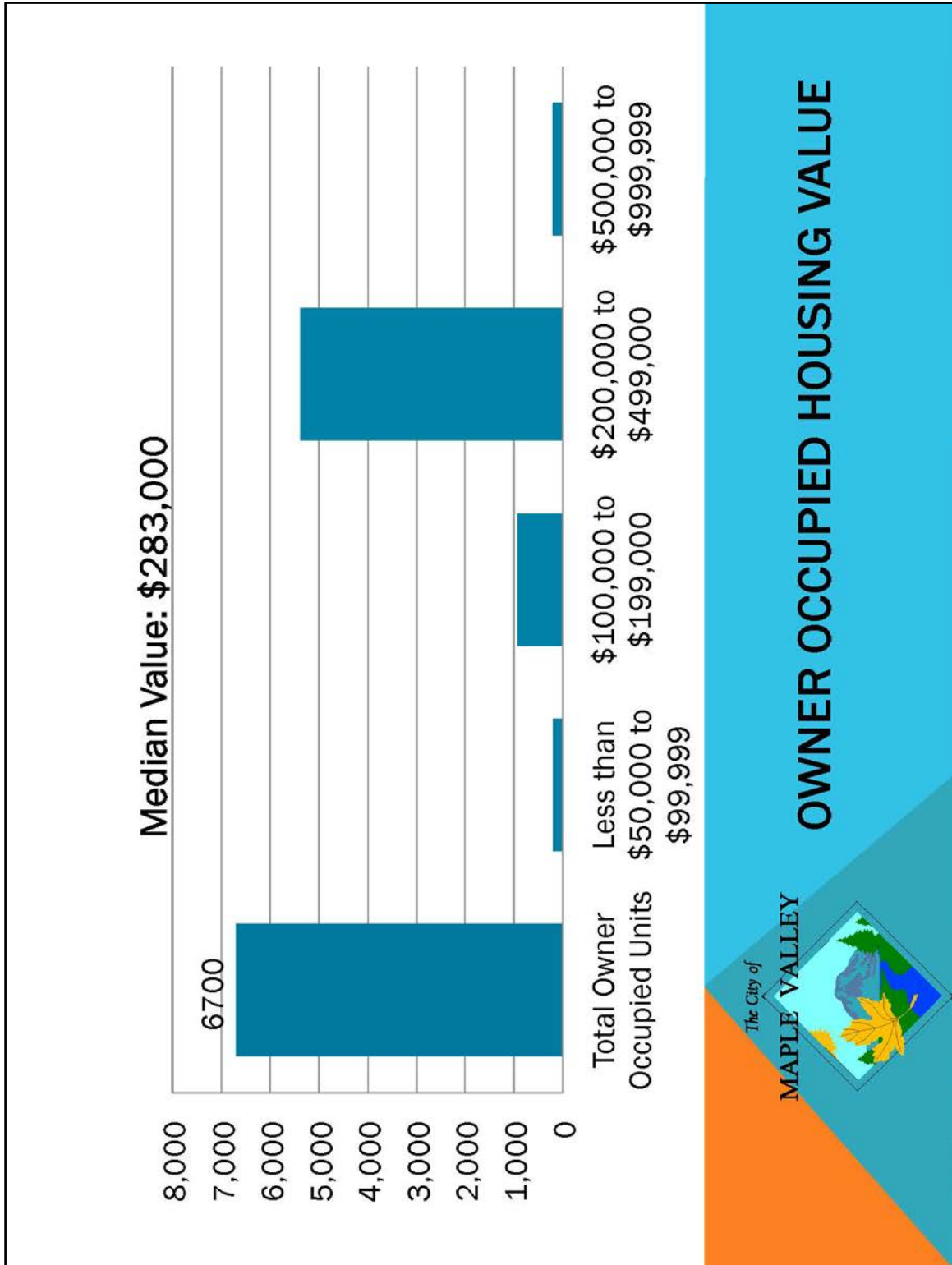




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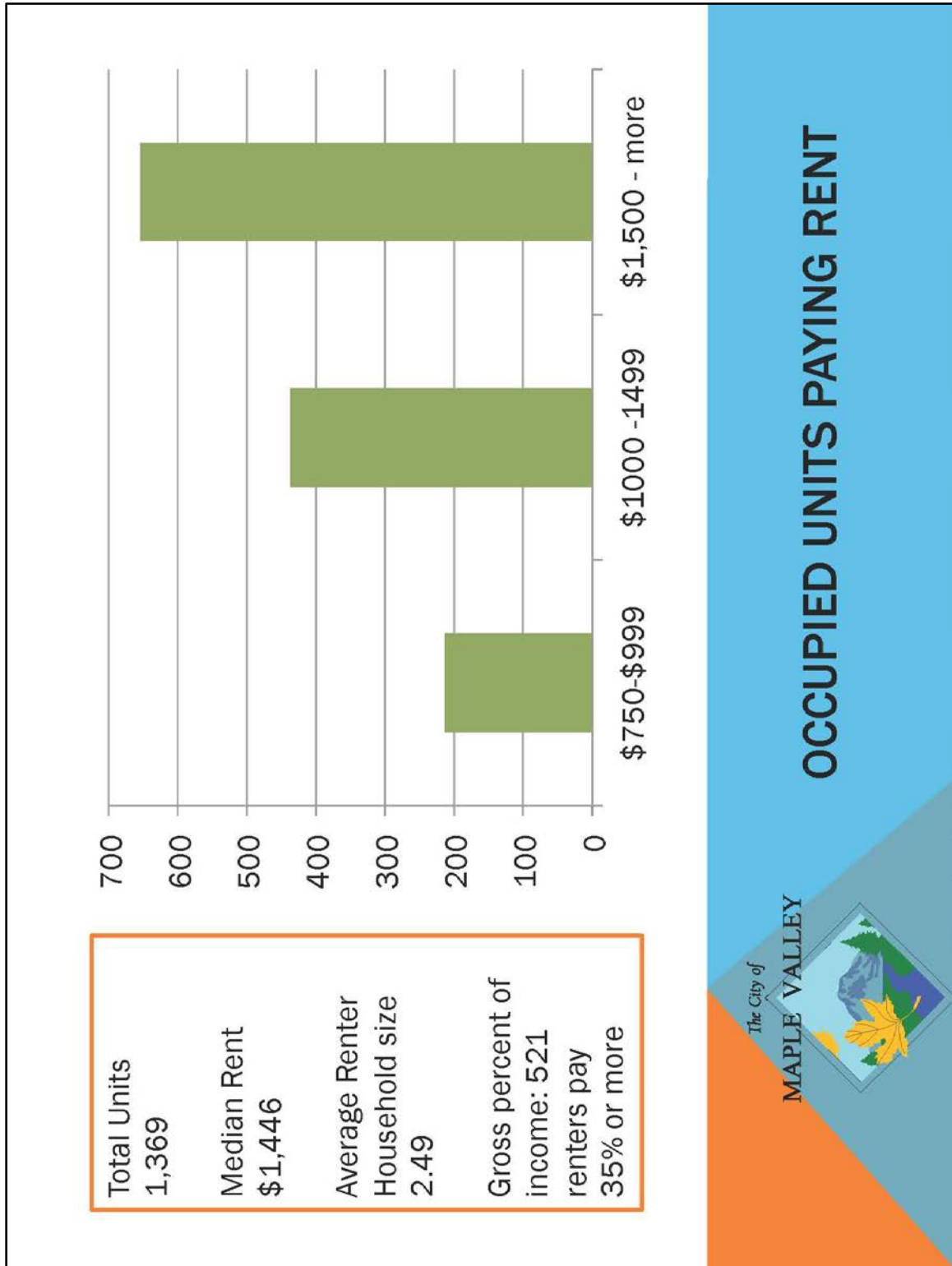




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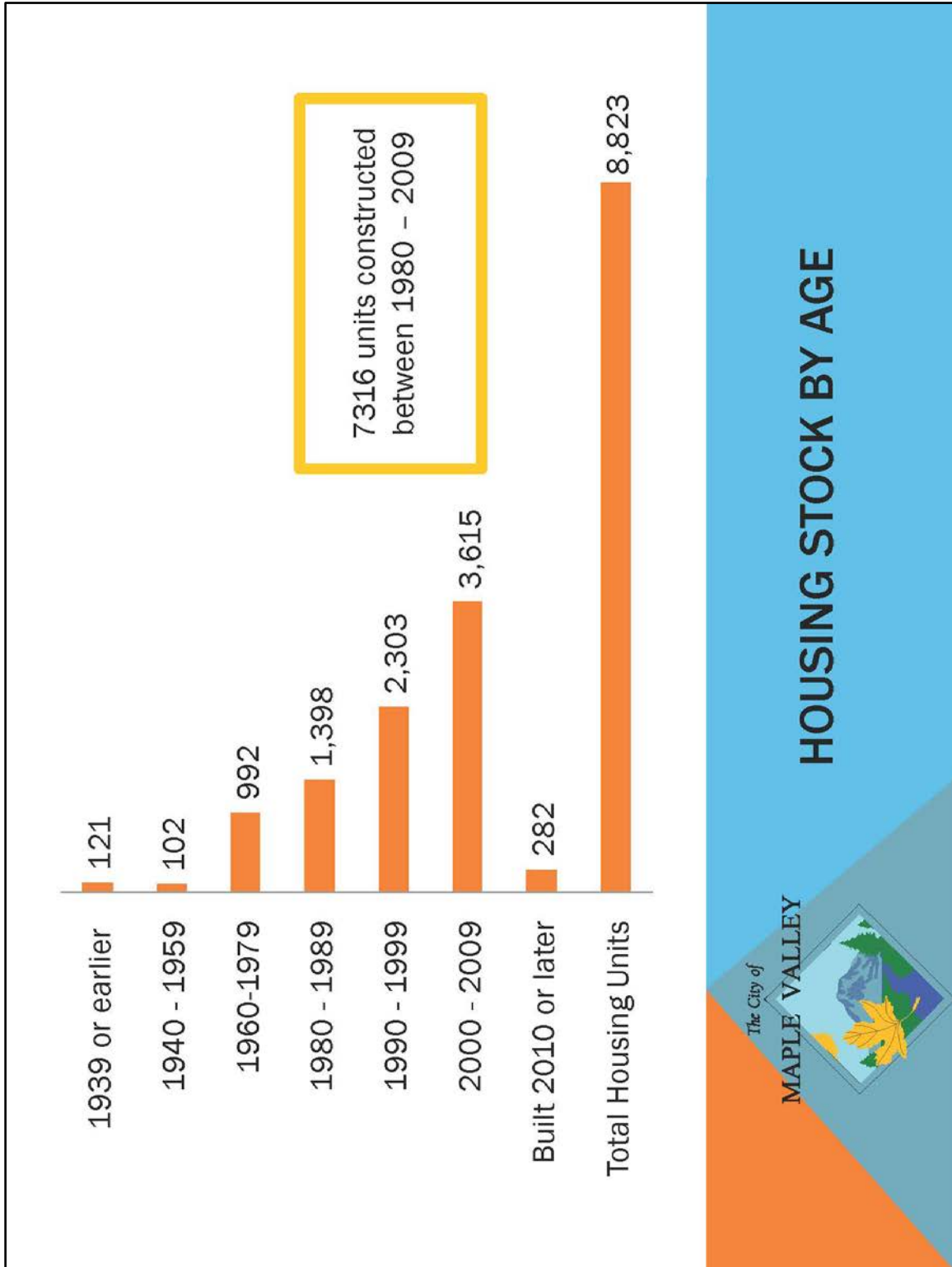
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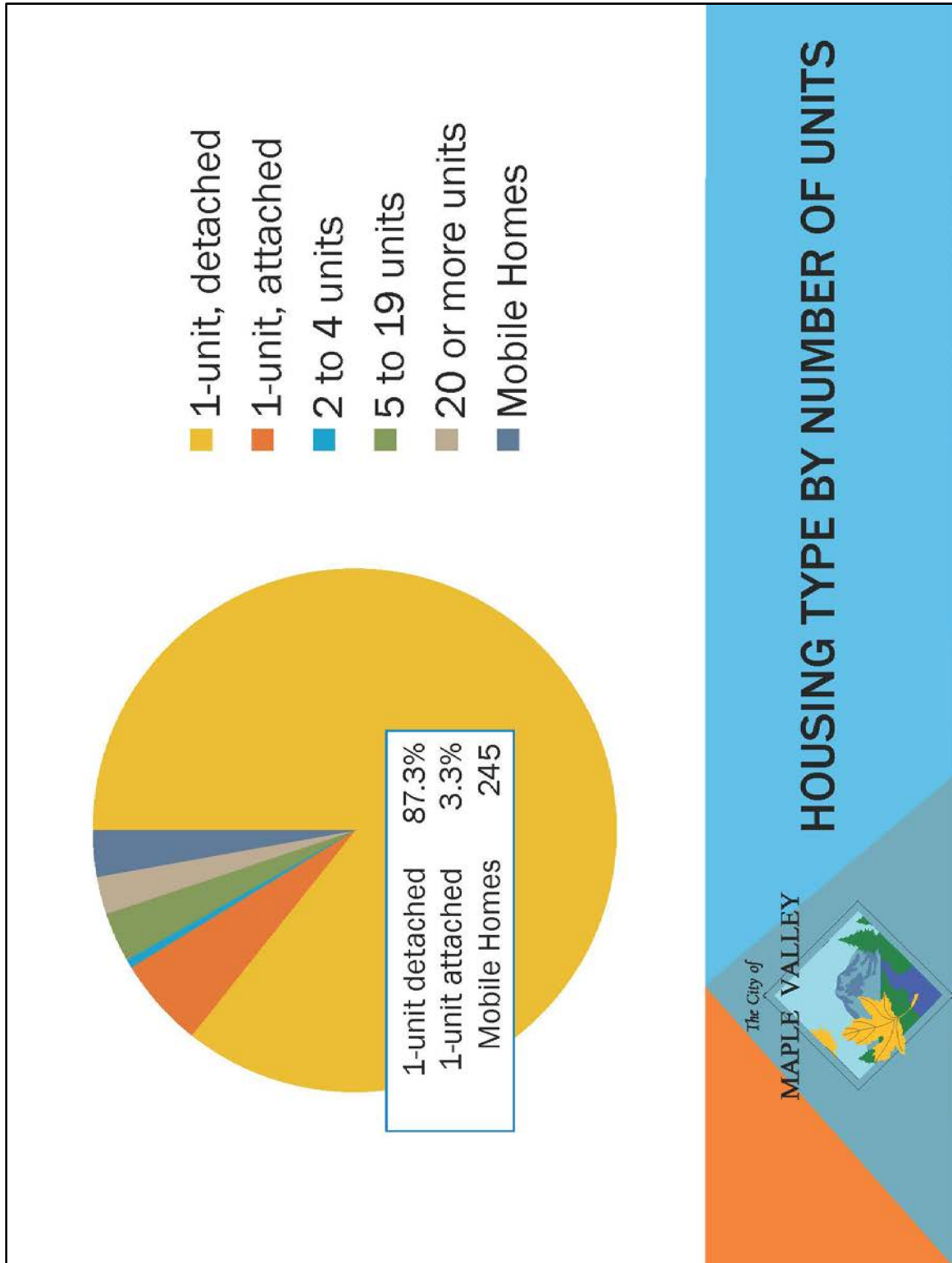




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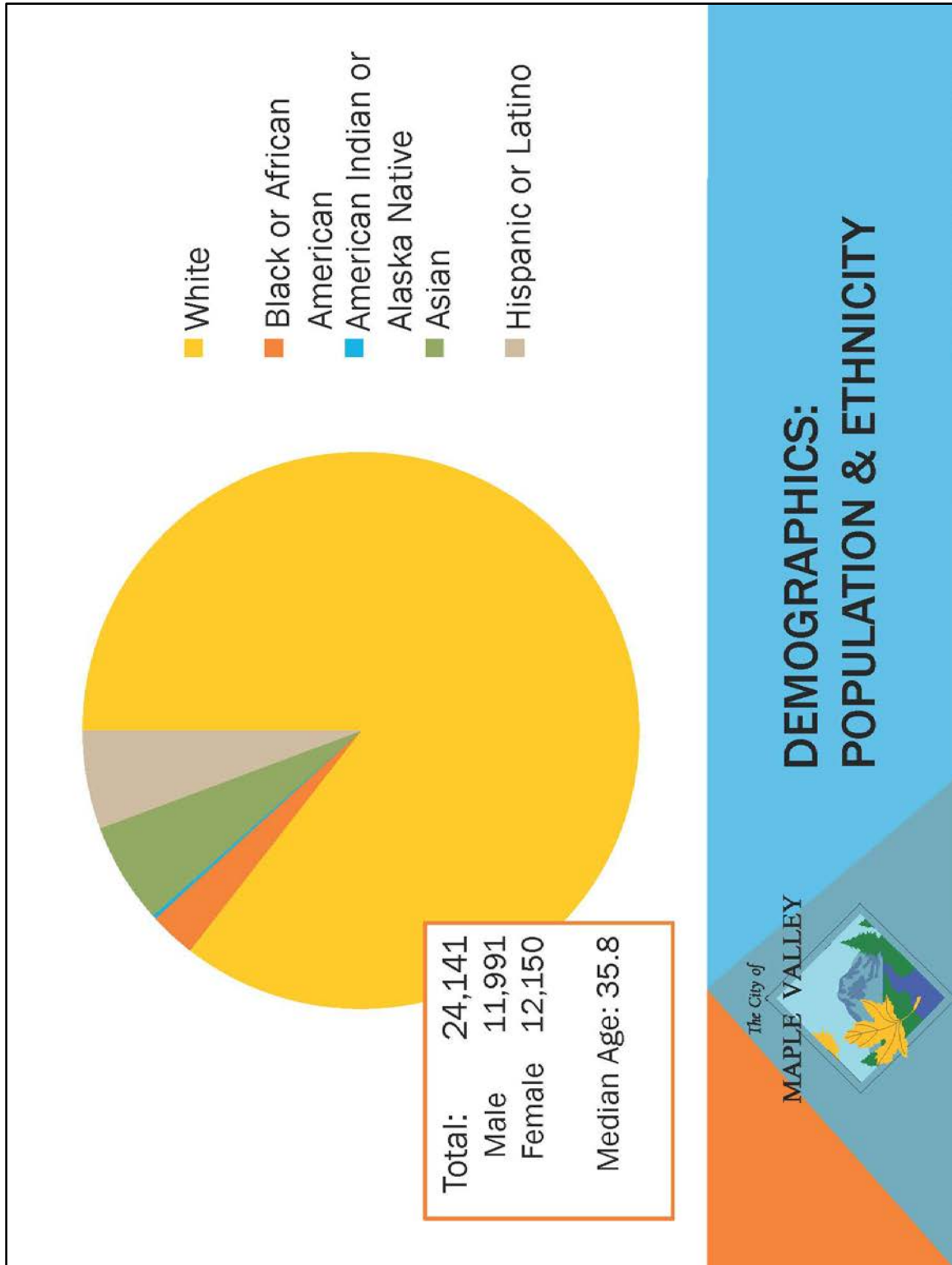




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Median Household Income:	\$96,124
With one or more people under the age of 18	49.2%
Living alone over 65	6.9%
Families and people Below Poverty Level	3.4%
Of those with female as head of household, no husband present, related children under 5	17.4%



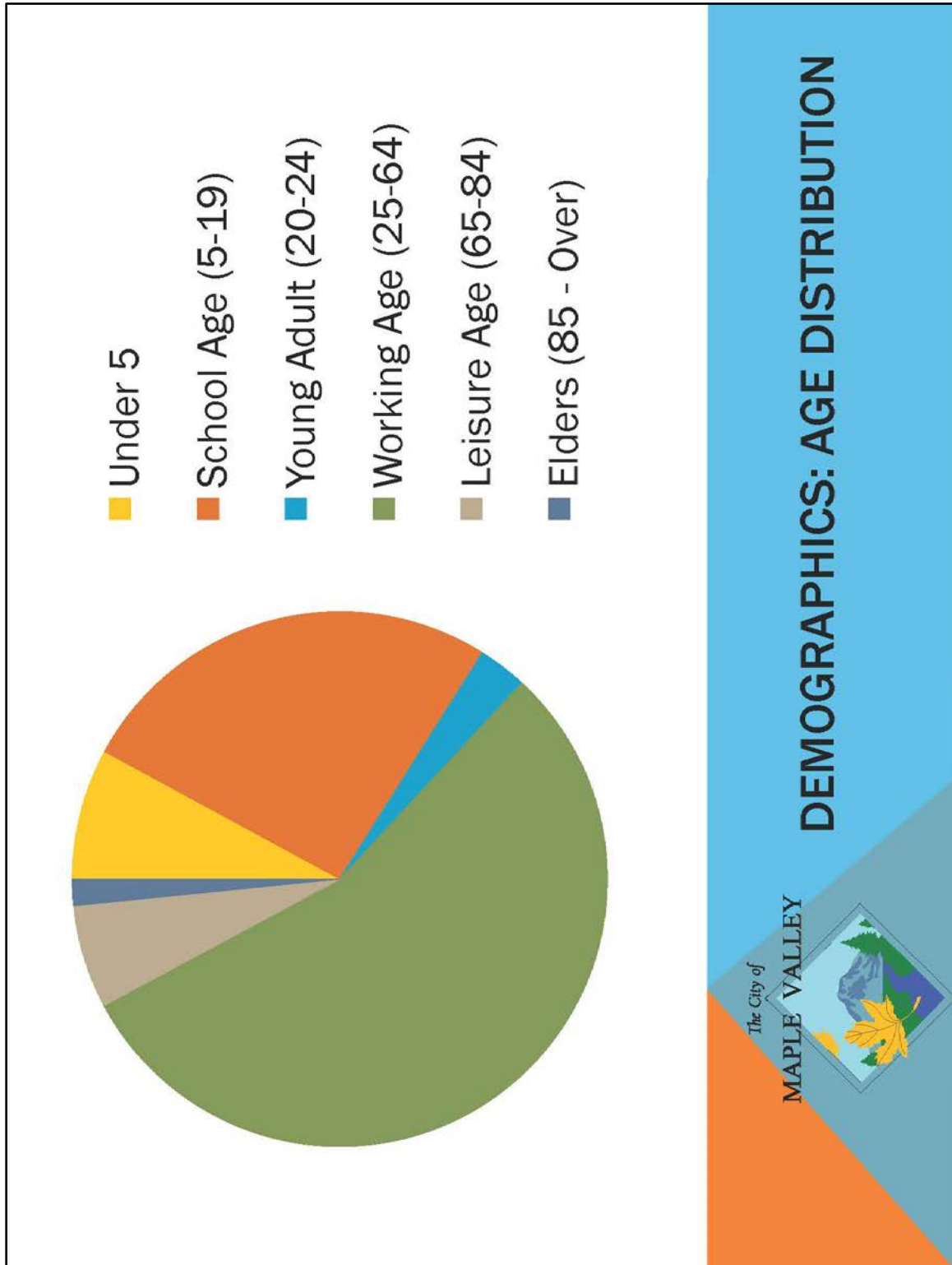
HOUSEHOLD HIGHLIGHTS

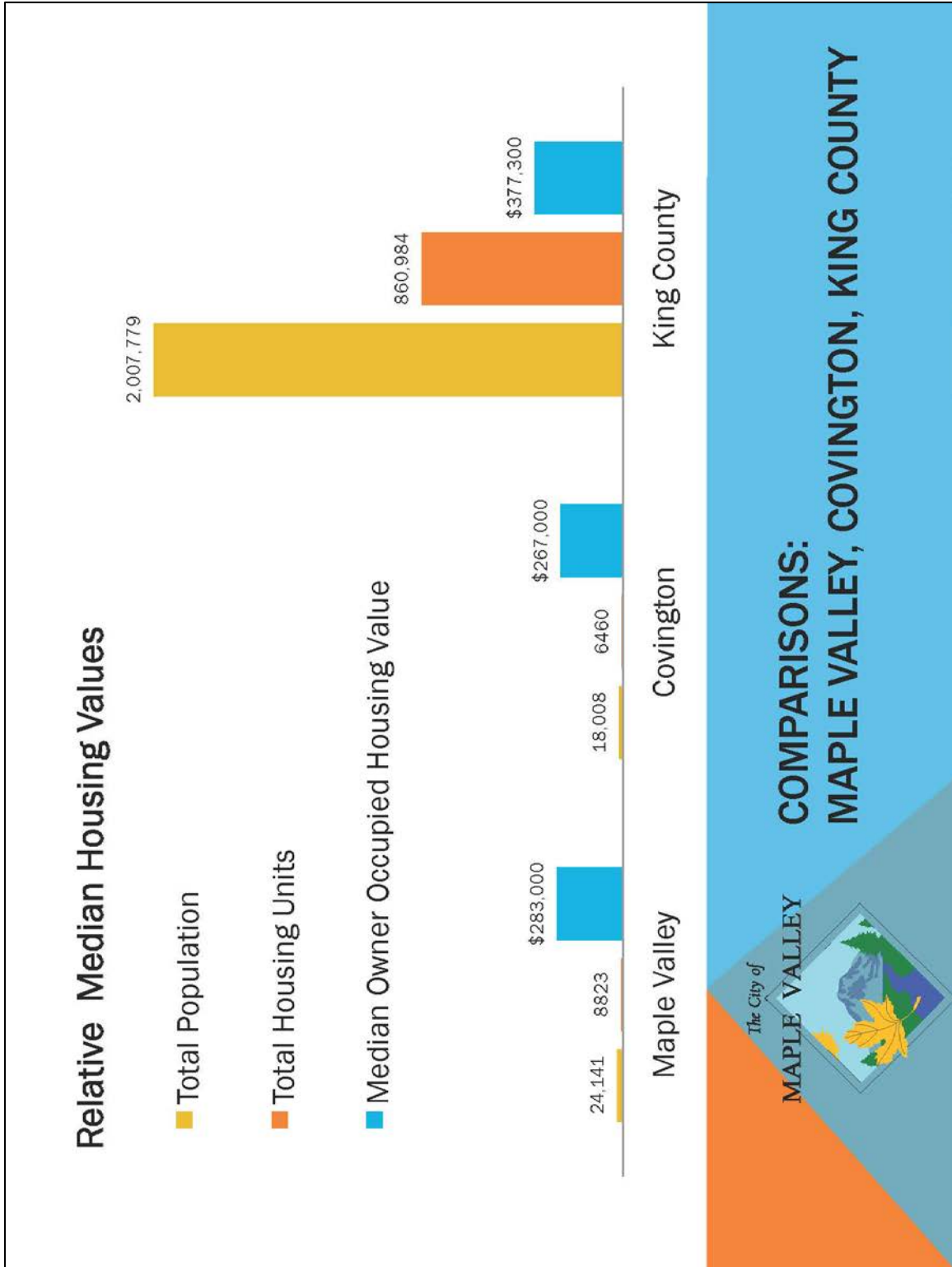


Element 3

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GOALS & POLICIES

- Goal HO-1** Provide sufficient capacity to accommodate the 20-year growth target.
- Policies:**
- HO-P1.1** Assure that sufficient acreage and densities are designated on the Future Land Use Map to enable reaching the City's population target for 2035.
 - HO-P1.2** Assure that adequate services and infrastructure are provided to support the present and future populations who will reside in the City's residential districts.
- Goal HO-2** Adopt a strategy of increasing the availability of apartments in Maple Valley, in order to better provide for workforce housing, create more options for seniors and singles, and bring the City closer to the countywide averages for the percentage of housing that is affordable to lower income households.
- Policies:**
- HO-P2.1** Focus efforts to increase multi-family in Town Center and other commercial districts where supporting services and multi-modal transportation choices can be provided.
 - HO-P2.2** Adopt new building forms, densities and design standards that will keep the unit cost of new apartments down while providing for a quality living environment for residents.
 - HO-P2.3** Consider incentives for new multi-family in Town Center and other commercial districts, including, but not limited to, property tax exemption, density bonuses and expedited permitting.
 - HO-P2.4** Encourage the provision of workforce housing as a component of the work training campus in the Regional Learning and Technology Center.
- Goal HO-3** Provide a range of housing types to encourage an adequate choice of living accommodation for those desiring to live in Maple Valley, regardless of income level.
- HO-P3.1** Strive to preserve the existing housing stock by supporting agencies and organizations involved in and programs targeted at housing repair and rehabilitation.
 - HO-P3.2** Protect the quality and character of existing residential neighborhoods by incorporating design guidelines for mixed-use and multi-family projects in the development code and enforcing building code requirements.
 - HO-P3.3** Strive to minimize the impacts of new development on the character, lifestyle, and quality of existing neighborhoods.



HOUSING

Goals & Policies

- HO-P3.4** Provide for a variety of housing types and prices including, but not limited to multi-family development, townhouses, mixed-use/mid-rise development, and small-lot, single-family development.
- HO-P3.5** Designate areas of medium and high density housing close to the commercial nodes, transportation facilities, and public services.
- HO-P3.6** Recognize that existing mobile homes provide an affordable housing option for Maple Valley residents.
- HO-P3.7** Expand opportunities for affordable housing by ensuring that manufactured housing is allowed in all single-family zones and regulated the same as stick-built housing.
- HO-P3.8** Adopt provisions for the allowance of accessory housing units in single-family residences.
- HO-P3.9** Consider adoption of Property Tax Exemption (PTE) incentives to facilitate the provision of a percentage of low-to moderate-income housing, especially for seniors and workers in service industries in Maple Valley.

Goal HO-4 Increase home ownership opportunities for those desiring to live in Maple Valley.

- HO-P4.1** Explore opportunities for coordination of incentive programs with other jurisdictions to develop common affordable housing program guidelines and reduce administrative costs.
- HO-P4.2** Maintain incentives available to both single-family and multi-family developments that provide rental or ownership housing affordable to low- and moderate-income households.
- HO-P4.3** Continue to improve development standards to allow flexibility of housing types in all residential zones, in order to best accommodate the environmental conditions on the site and the surrounding neighborhood.
- HO-P4.4** Minimize the time necessary to process development permits, but in such a manner so as to not jeopardize the integrity of the permitting process.
- HO-P4.5** Consider adoption of co-housing and cottage housing ordinances to provide additional home ownership choices for multi-generational and smaller households in residential neighborhoods.

Goal HO-5 Promote opportunities for access to housing for *all* persons.

- HO-P5.1** Disperse, rather than concentrate, special needs housing throughout the community. Special needs housing serves persons who, by virtue of disability of other circumstances, face difficulty living independently and require supportive services on a transitional or long term basis.



HOUSING

Goals & Policies

- HO-P5.2** Promote opportunities for assisted housing, including housing for low income people with special needs by:
- Sub-Policies**
- HO-P5.2.1** Adopting land use regulations that treat government-assisted housing and other low income housing the same as housing of a similar size and density; and
 - HO-P5.2.2** Adopting funding and program policies that allow the integration of assisted housing within communities; and
 - HO-P5.2.3** Encouraging developers and owners of assisted housing units to undertake activities to establish and maintain positive relationships with neighbors; and
 - HO-P5.2.4** Participating in an interlocal cooperation agreement for the administration of Community Development Block Grant funds.
- HO-P5.3** Make reasonable accommodations in rules, policies, practices and services when such accommodations may be necessary to afford persons with disabilities equal opportunity to use or enjoy a dwelling.
- HO-P5.4** Permit group homes pursuant to state and federal law, including those where residents receive such supportive services as counseling, foster care or medical supervision, within a single-family house or apartment.
- HO-P5.5** Work with other jurisdictions and housing providers across the state to urge state and federal governments to expand funding for rental assistance and emergency services, including sufficient funding to allow people with disabilities to afford community based housing.

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Support Analysis

INTRODUCTION

The Transportation Element provides the link between the Land Use Element and the transportation facilities and services needed to support growth during the next twenty years. This is accomplished by identifying capacity, operational, and safety improvements along City roadways and also by addressing multimodal needs such as transit, pedestrian, and bicycle facilities. The Transportation Element reflects the interdependence of transportation and land use and is influenced by choices made as part of the Land Use Element. Conversely, land uses are similarly influenced by choices and policies made in the Transportation Element.

The Transportation Element is a key component of the City's Comprehensive Plan and works hand-in-hand with other Comprehensive Plan Elements. It identifies the City of Maple Valley's goals and policies for transportation as well as the City's future transportation system and facilities, level-of-service (LOS) standards, and concurrency monitoring system. Future land uses proposed as part of the Land Use Element are used to develop transportation strategies and to identify necessary transportation facilities (roadways, sidewalks, trails, bike lanes, etc.). Similarly, the Capital Facilities Element and the City's ongoing Transportation Improvement Program (TIP) present more-specific facility recommendations based on the Transportation Element.

Growth Management Act

The Transportation Element was developed in accordance with the Washington State Growth Management Act (GMA). The GMA requires that the following topics be addressed within the Transportation Plan:

- Land use assumptions used in estimating travel demand.
- An inventory of existing transportation facilities and services.
- LOS standards to gauge the performance of the system.
- Identification of actions and requirements needed to bring existing facilities and services up to standard.
- Forecasts of future traffic based on the land use plan.
- Identification of improvements and programs needed to address current and future transportation system deficiencies, including Transportation Demand Management strategies.
- A realistic multi-year financing plan that is balanced with the adopted level of service standards and the land use element.
- An explanation of intergovernmental coordination and regional consistency.

Local transportation elements must also include the following:

- State-owned transportation facilities in the transportation inventory.
- The LOS for state-owned transportation facilities.



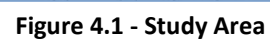
TRANSPORTATION

Support Analysis

- Identification and assessment of GMA concurrency and the applicability to highways of statewide significance.
- An estimate of the impacts to state-owned transportation facilities resulting from local land use assumptions.

Study Area

The study area includes all of the area within Maple Valley city limits and Urban Growth Area (UGA). The UGA has been delineated with King County, consistent with the requirements of the GMA. The transportation planning study area is shown in Figure 4.1. The City lies adjacent to the UGAs of the City of Covington (west) and the City of Black Diamond (south). Unincorporated areas of King County surround portions of Maple Valley, and sections of the city limits are used to define portions of the regional Urban/Rural Boundary between urban and rural lands.



**TRANSPORTATION**

Support Analysis

EXISTING TRANSPORTATION SYSTEM INVENTORY

The City's transportation system consists of various transportation facilities, including state highways, arterials, local streets, transit services and facilities, and pedestrian and bicycle facilities. The existing transportation system was inventoried in conjunction with the update of the Transportation Element. The inventory covers the street system, traffic controls, traffic volumes, traffic operations, traffic safety, transit service, and pedestrian and bicycle facilities.

Roadway System and Traffic Controls

The following summarizes the existing roadway system including roadway geometry and locations of signalized and roundabout controlled intersections. Several intersections within the City are signalized, with most of them located along the state highways. Figure 4.2 shows the existing street system as well as signalized and roundabout controlled intersections within the City.

Arterials

Arterials are the major streets that connect Maple Valley with the region, while also serving important intra-city connections. These roads provide for the majority of vehicular travel within the City. These arterial routes create the transportation foundation the City street network is built upon.

SR 169

SR 169 (Renton-Maple Valley Road SE, Maple Valley-Black Diamond Road SE) links Maple Valley to Renton to the north and Black Diamond to the south. SR 169 is primarily a two-lane road through Maple Valley with a 45 to 50 mph speed limit. However, speeds reduce to (35 and 40 mph) and the roadway widens (four to five lanes) near the commercial areas of Wilderness Village and Four Corners. Traffic signals control SR 169 intersections at SE 231st Street, SE Wax Road, Witte Road SE, SE 240th Street, SE 264th Street, SR 516, SE 276th Street, and SE 280th Street. It is classified as a Highway of Statewide Significance (HSS) by the Washington State Legislature.

Kent-Kangley Road

Kent-Kangley Road (SR 516, SE 272nd Street) links Maple Valley to Covington to the west and rural King County to the east. Kent-Kangley Road is a two lane road with turn-lane pockets at major intersections. West of SR 169, it has a posted speed limit of 45 mph. East of SR 169, it has a posted speed limit of 50 mph. Traffic signals control SR 516 intersections at 216th Avenue SE, Witte Road SE, 228th Avenue SE, and SR 169. SR 516 is classified as a Tier 2 Highway of Regional Significance (HRS) by PSRC.

SR 18

SR 18, which borders the City, is a controlled access divided highway linking Maple Valley to Covington, Auburn and Interstate 5 to the west and Interstate 90 to the east. The SR 18/SE 232nd Street interchange coupled with the nearby SR 169/SE 231st Street intersection act as the primary northern gateway to the City. Traffic signals control both SR 18 ramp intersections with SE 232nd



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Street. It is classified as a Highway of Statewide Significance (HSS) by the Washington State Legislature.

Witte Road SE

Witte Road SE is a two to three lane roadway with a 35 mph speed limit. Witte Road SE provides north-south access through the western portion of the City which is primarily comprised of residential land uses. Traffic signals control intersections at SR 169, SE 240th Street, and SR 516. A roundabout has been installed at the intersection with SE 248th Street.

SE Wax Road

SE Wax Road is a two to three lane roadway with a 35 mph speed limit providing regional access to King County and Covington to the west. Within Maple Valley, the only traffic signal along SE Wax Road is located at the intersection with SR 169.



Element 4

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Support Analysis

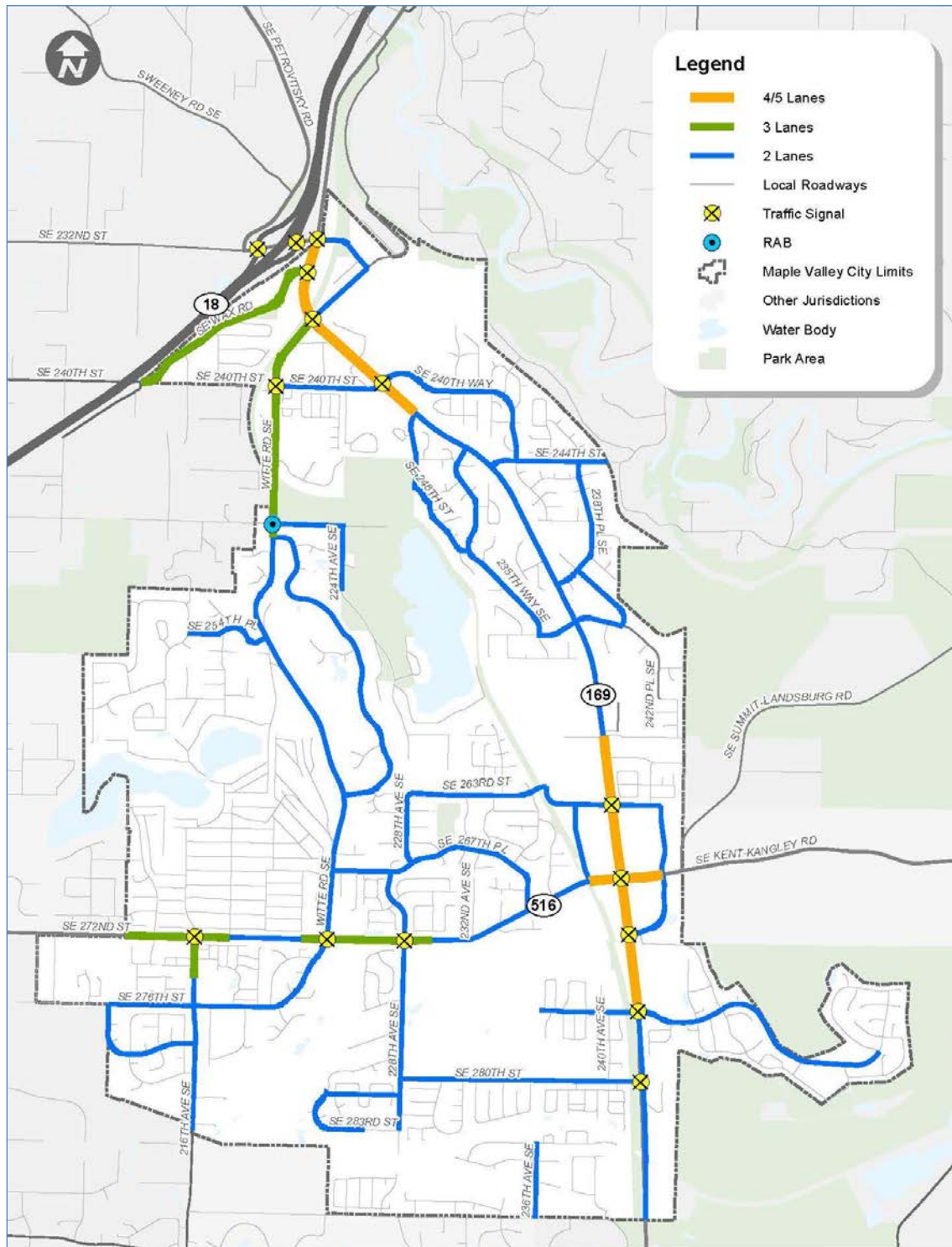


Figure 4.2 - Existing (2014) Street System & Traffic Control

**TRANSPORTATION****Support Analysis****216th Avenue SE**

216th Avenue SE is a two lane north-south link in the southwest area of the City. This roadway links SR 516 to residential areas and Black Diamond to the south. The speed limit is 35 mph and a traffic signal is located at the SR 516 intersection.

Collector Streets

Collector streets direct traffic from neighborhoods to the arterial system. Collectors can provide a higher level of direct access than arterials. Collector streets generally have two travel lanes and 30 to 25 mph speed limits. Examples of streets designated as collectors are SE 240th Street, SE 244th Street, SE 248th Street, SE 264th Street, SE 276th Street, SE 280th Street, and 228th Avenue SE.

Local Access Streets

Local business and neighborhood access streets serve local abutting land uses and neighborhood traffic. All Maple Valley public streets not classified as arterials or collectors are considered local access streets. These local streets generally have two travel lanes and 25 mph speed limits.

Traffic Volumes

PM peak hour traffic volumes were collected early in 2014 at the study intersections. Using factors from 2012 daily and PM peak hour counts, 2014 daily volumes were estimated. Figure 4.3 shows existing traffic volumes within the City. Figure 4.4 summarizes the rates of growth along Maple Valley's major corridors compared to 2010 PM peak hour traffic volumes.

As shown in Figure 4.4, the annual traffic growth for the weekday PM peak hour was largest on the state highways (SR 169 and SR 516). Along SR 169, traffic grew between four to six percent annually throughout the City. North of SE 231st Street, the growth was much less, suggesting most growth was associated with routes connected to SR 18. Annual traffic growth along SR 516 grew at a higher rate, between 5 to 8 percent within the City east of 216th Avenue SE. Witte Road SE had generally flat growth on the north end of the corridor, and about three percent growth on the south end near SR 516. This suggests that growth along SR 169 is not oriented to Witte Road SE.

There are several factors that have contributed to the traffic volume changes since the 2011 Transportation Element was completed. New commercial development in the Four Corners area is increasing demand on local and regional roadways in the area. New residential developments in the southern areas of the City and in neighboring cities have increased commuting patterns through the City. In addition, the City has continued to increase roadway capacity on state highways and intersections, reducing the capacity bottlenecks on these corridors.



TRANSPORTATION

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Roadway	Location ²	PM Peak Hour Volumes ¹			
		Total Volume (2010)	Annual Growth (2010 to 2014)	Total Volume (2014)	Total Daily Volume ³ (2014)
NORTH-SOUTH ROADWAYS					
SR 169	n/o SE 231st St	1,900	0.9%	2,000	23,900
	n/o SE Wax Rd	2,650	5.0%	3,150	38,100
	n/o Witte Rd SE	3,050	3.7%	3,500	42,400
	n/o SE 240th St	1,700	5.6%	2,150	25,800
	n/o SE 244th St	1,750	6.0%	2,100	25,500
	s/o SE 244th St	1,450	6.1%	1,900	23,000
	n/o SR 516	1,450	5.4%	1,800	21,500
	s/o SR 516	1,450	5.1%	1,800	21,700
	n/o SE 276th St	1,500	4.8%	1,750	21,200
	n/o SE 280th St	1,200	6.0%	1,450	17,500
	s/o SE 280th St	950	6.2%	1,200	14,500
Witte Rd SE	s/o SR 169	1,250	0.9%	1,650	16,500
	s/o SE 240th St	1,400	0.0%	1,450	14,400
	n/o SE 254th Pl	1,200	0.0%	1,150	11,700
	s/o SE 254th Pl	1,000	0.0%	1,050	10,700
	n/o SE 268th St	1,000	3.1%	1,050	10,600
	n/o SR 516	750	3.0%	850	9,400
EAST-WEST ROADWAYS					
SR 516	w/o 216th Ave SE	1,600	1.1%	1,700	20,200
	w/o Witte Rd SE	1,300	5.2%	1,550	18,800
	w/o 228th Ave SE	1,150	5.9%	1,450	17,400
	e/o 228th Ave SE	950	8.1%	1,300	15,900
	w/o SR 169	1,050	5.8%	1,300	15,500
	e/o SR 169	1,000	6.8%	1,250	15,300
SE 231st St	w/o SR 169	1,700	3.9%	1,950	23,700
SE Wax Rd	w/o SR 169	1,000	-1.8%	950	9,500

1. 2014 pm Peak hour volumes based on turning movement counts collected in February 2014. Volumes from 2010 based on counts conducted as part of the 2010 Transportation Element.
2. n/o=north of ;s/o=south of; e/o=east of; w/o=west of
3. Daily volumes based on 2014 PM peak hour counts, and on daily-to-peak factors from 2012 daily counts.

Figure 4.4 - Historical Weekday PM Peak Hour Traffic Volume Comparisons and Daily Volumes



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Traffic Operations

Traffic volumes were used to evaluate existing traffic operations in Maple Valley. Traffic operations analysis provides a quantitative method for evaluating existing and future transportation alternatives. The City's operational standard is presented along with the analysis methodology. A discussion of existing traffic operations is also provided.

Analysis Methodology

Traffic operations were evaluated for the existing year (2014) based upon the level of service (LOS) methodologies of the Highway Capacity Manual (HCM) (Transportation Research Board, 2010). The HCM is a nationally recognized and locally accepted method of measuring traffic flow and congestion. Criteria range from LOS A, indicating free-flow conditions with minimal vehicle delays, to LOS F, indicating extreme congestion with significant vehicle delays. At signalized intersections, LOS is defined in terms of average delay per vehicle. At un-signalized intersections, LOS is measured in term of the average delay per vehicle and is typically reported for the worst traffic movement instead of for the whole intersection.

Intersection LOS analysis was performed for major intersections within the study area based on 2014 conditions. Intersections were selected based upon location and likelihood that they might be impacted by future growth. Twenty-one intersections were identified for analysis, similar to what was studied previously in 2010. Turning movement counts collected in February 2014 were used in this analysis.

LOS Results

Figure 4.6 summarizes the LOS results, delay, and worst movements at the study intersections for 2010 and 2014. The LOS results are also illustrated on Figure 4.5. For the North Maple Valley concurrency study intersections, the weighted average of intersection delay creates LOS D conditions, which is considered acceptable. The South Maple Valley concurrency study intersection weighted average is also at an acceptable LOS D. All other non-concurrency signalized intersections are within City LOS standards. For unsignalized intersections, the new study intersection at SE Kent-Kangley Road/243rd Avenue SE operates at LOS F which does not meet City LOS standards. All other unsignalized and roundabout intersections are within City LOS standards.

Compared to the 2010 analysis, most of the intersections operate at about the same LOS as before. The notable exceptions are: SR 169/Witte Road SE (LOS D to F, with increased volumes); SR 169/SE 271st Street (LOS F to A, with new signal); SR 169/SR 516 (LOS C to LOS D, with increased volumes); and SR 516/Witte Road SE (LOS C to LOS D, with increased volumes).



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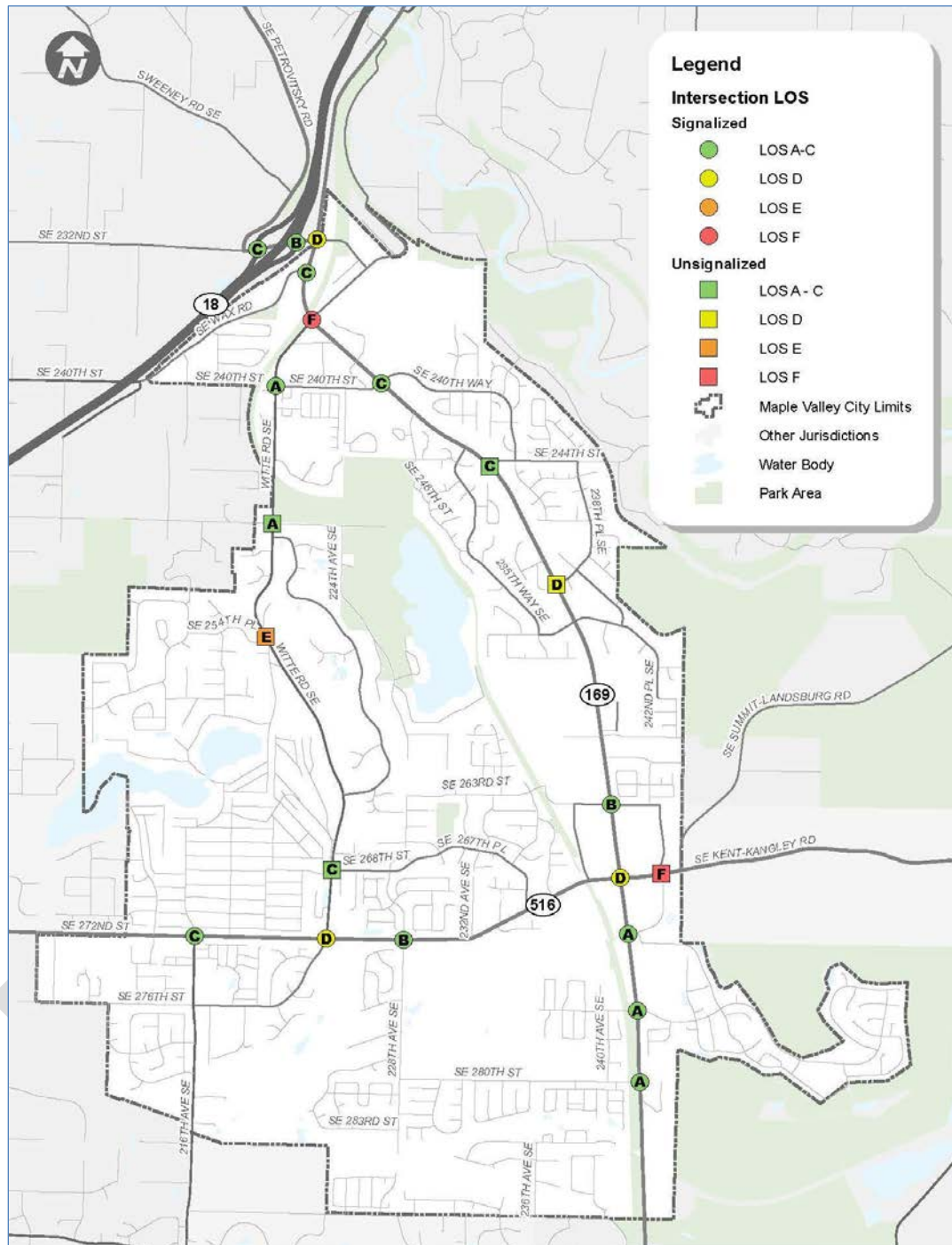


Figure 4.5 - Existing (2014) Intersection Levels of Service



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Intersection		2010 PM Peak Hour ¹			2014 PM Peak Hour		
Major Rd	Minor Rd	LOS ²	Delay ³ (WM) ⁴	Control ⁵	LOS	Delay (WM)	Control
SR 169	SE 231st St	D	36	Signal	D	38	Signal
SR 169	SE Wax Rd	D	38	Signal	C	31	Signal
SR 169	Witte Rd SE	D	55	Signal	F	89	Signal
SR 169	SE 240th St	C	32	Signal	C	23	Signal
SR 169	SE 244th St	C	24 (WB)	TWSC	C	21 (WB)	TWSC
SR 169	SE 251st St	C	16 (WB)	TWSC	D	28 (WB)	TWSC
SR 169	SE 264th St	A	5	Signal	B	17	Signal
SR 169	SR 516	C	29	Signal	D	44	Signal
SR 169	SE 271st St	F	>200 (WB)	TWSC	A	8	Signal
SR 169	SE 276th St	A	9	Signal	A	10	Signal
SR 169	SE 280th St	B	11	Signal	A	9	Signal
SR 516	216th Ave SE	B	15	Signal	C	21	Signal
SR 516	Witte Rd SE	C	29	Signal	D	53	Signal
SR 516	228th Ave SE	A	7	Signal	B	12	Signal
Witte Rd SE	SE 240th St	B	12	Signal	A	9	Signal
Witte Rd SE	SE 248th St	A	5	Round	A	6	Round
Witte Rd SE	SE 254th Pl	E	40 (EB)	TWSC	E	39 (EB)	TWSC
Witte Rd SE	SE 268th St	B	14 (EB)	TWSC	C	16 (WB)	TWSC
SE 231st St	SR 18 NB Ramps	C	23	Signal	B	11	Signal
SE 231st St	SR 18 SB Ramps	C	31	Signal	C	27	Signal
SE Kent-Kangley Rd	243rd Ave SE		NA ⁶		F	56 (SB)	TWSC
<i>Corridor Weighted Average LOS</i>							
North Maple Valley (4 intersections)		D	41		D	47	
South Maple Valley (3 intersections)		C	25		D	40	

1. Level of service evaluated as part of 2011 Transportation Plan update.
2. Level of service (A to F), Level of service analysis based on *Highway Capacity Manual 2010* (TRB, 2010) methodology.
3. Average delay in seconds per vehicle.
4. \Worst movement (For unsignalized intersections, level of service reflects operations for worst movement only).
5. Intersections traffic control: "Signal" is traffic signal; "TWSC" has stop signs on minor approach; "Round" is a roundabout. Not available. Intersection not evaluated in 2004.

Figure 4.6 - 2014 Weekday PM Peak Hour LOS at Study Intersections

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Support Analysis

Traffic Safety

Historical collision data along both SR 169 and SR 516 were provided by WSDOT for the three-year period from 2012 to 2014 (the most recent data available). The summary of reported accidents along each state highway is shown in Figures 4.7 and 4.8. In addition, no collisions resulting in fatalities were reported within the City of Maple Valley during the analysis time period.

Intersection Safety Analysis

Figure 4.7 summarizes the collision history at major intersections study intersections. The most common collision types for SR 169 and SR 516 intersections were rear-end collisions, typically reflective of congested conditions during peak hours. Typically any intersection with a collision rate greater than 1.0 collision per million entering vehicles (MEV) should be monitored closely to determine if improvements could be made to improve safety. In the most recent collision safety analysis, none of the intersections reached this collision rate threshold.

At most study intersections the average annual number of collisions has decreased compared to the 2010 analysis. Most notably are collision reductions at SR 169/SE 231st Street, SR 169/SE 240th Street, and SR 169/SR 516 despite increases in traffic volumes. This suggests the City efforts to improve safety through roadway improvements and other means appear to be successful.



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Intersection	2010 Analysis				2014 Analysis			
	Total # of Collisions (2006 to 2009)	Average Collisions per Year (2010)	Collisions per MEV (2010) ²	Most Common Collision Type	Total # of Collisions (2012 to 2014)	Average Collisions per Year (2014)	Collisions per MEV (2014)	Most Common Collision Type
SR 169 / SE 231st St	52	17.3	1.5	Rear-End	25	8.3	0.6	Rear-End
SR 169 / SE Wax Rd	34	11.3	0.9	Rear-End	20	6.7	0.5	Rear-End
SR 169 / Witte Rd SE	13	4.3	0.4	Rear-End	8	2.7	0.2	Angle
SR 169 / SE 240th St	24	8.0	1.1	Rear-End	10	3.3	0.4	Rear-End
SR 169 / SE 244th St	2	0.7	0.1	Rear-End	4	1.3	0.2	Angle
SR 169 / SE 251st St		NA ¹			0	0.0	0.0	None
SR 169 / SE 264th St	5	1.7	0.3	Rear-End	9	3.0	0.3	App. Turn
SR 169 / SR 516	33	11.0	1.2	Rear-End	27	9.0	0.8	Rear-End
SR 169 / SE 271st St	8	2.7	0.4	Angle	12	4.0	0.5	Angle
SR 169 / SE 276th St	5	1.7	0.3	Angle	5	1.7	0.2	Angle
SR 169 / SE 280th St	6	2.0	0.5	Rear-End	3	1.0	0.2	Rear-End
SR 516 / 216th Ave SE	13	4.3	0.7	Rear-End	17	5.7	0.8	Rear-End
SR 516 / Witte Rd SE	18	6.0	0.9	Rear-End	18	6.0	0.8	Rear-End
SR 516 / 228th Ave SE	4	1.3	0.3	Rear-End	10	3.3	0.6	Rear-End
Witte Rd SE / SE 240th St	3	1.0	0.2	Rear-End	4	1.3	0.2	Rear-End
Witte Rd SE / SE 248th St	9	3.0	0.6	Rear-End	10	3.3	0.6	Fixed Obj.
Witte Rd SE / SE 254th St	1	0.3	0.1	Rear-End	3	1.0	0.2	Rear-End
Witte Rd SE / SE 268th St	6	2.0	0.6	Rear-End	0	0.0	0.0	None
SE 231st St / SR 18 NB Ramps	5	1.7	0.2	Rear-End	16	5.3	0.7	Angle
SE 231st St / SR 18 SB Ramps	14	4.7	0.7	Angle	7	2.3	0.3	Rear-End
SE Kent-Kangley Rd / 243rd Ave SE		NA ¹			6	2.0	0.5	Angle

Source: WSDOT Historical Collision Records (2012-2014)

1. "NA" means intersection not evaluated in 2010.

2. Collisions per million entering vehicles.

Figure 4.7 - Collision History for Major Intersections (2012 to 2014)

Roadway Safety Analysis

The average number of collisions per year and associated collision rates were analyzed for both the SR 169 and SR 516 corridors to identify highway segments with potential safety issues. The results of the highway segment analysis are summarized in Figure 4.7. The highway segments listed in Figure 4.8 vary in length and traffic volume. To provide meaningful comparison, accidents along highway



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segments are typically analyzed in terms of collisions per million vehicle miles (MVM) traveled. No universally accepted guidelines exist for identifying hazards based on accident rates for highway segments alone.

As shown in Figure 4.8, most corridor segments show a drop in collision rates compared to the analysis done previously in 2010. The exception is the central section of SR 169 (SR 516 to SE 240th Street) that is showing a higher collision rate. The most common collision type is rear-end, suggesting congestion related causes. Overall, the roadway safety data does not identify any high accident locations in need of immediate improvement.

Segment	MP	2010 Analysis				2014 Analysis			
		Total Coll. (2006-2009) ¹	Ave. Coll. per year (2010) ²	Coll. per MVM (2010) ³	Most Common Collision Type	Total Coll. (2012-2014) ¹	Ave. Coll. per year (2014) ²	Coll. per MVM (2014) ³	Most Common Collision Type
SR 169 South (City Limits - SR 516)	10.19 - 11.44	13	4.3	0.6	Driveway Access	10	3.3	0.3	Rear-End
SR 169 Central (SR 516 - SE 240th St)	11.45 - 13.53	23	7.7	0.6	Rear-End	55	18.3	1.1	Rear-End
SR 169 North (SE 240th St - City Limits)	13.54 - 14.12	14	4.7	1.3	Rear-End	22	7.3	0.9	Rear-End
SR 516 (within City)	14.42 - 16.22	38	12.7	1.9	Rear-End	54	18.0	1.4	Rear-End

Source: WSDOT Historical Collision Records (2012-2014)

1. Total number of collisions.

2. Average number of collisions per year.

3. Collisions per million vehicles miles.

Figure 4.8 - Collision History for Highway Segments (2010 to 2014)

Pedestrian/Bike

Between 2012 and 2014, seven pedestrian or bicyclist collisions were reported. However, none of these collisions resulted in fatalities. The pedestrian/bicycle collisions were generally scattered throughout the City with no apparent patterns or reoccurring problems.

Transit and Public Transportation

Public transit and support facilities in Maple Valley are operated and owned by King County Metro Transit. These services include bus transit, carpooling, vanpooling, and park-and-ride lots. The regional, multi-county transit agency, Sound Transit, does not provide service to Maple Valley, but can be accessed in the Cities of Kent and Renton.

Bus Service

As of December 2014, three transit routes provide weekday service to the Maple Valley area. Two of these routes provide direct regional service to Renton and Seattle. The third route provides local service between Renton, Black Diamond, Maple Valley, and Enumclaw. Weekend service is only



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proved on Route 168 between Maple Valley and Kent. Transit service characteristics are summarized in Figure 4.9.

Route #	Scheduled Daily Trips	Service Span (Daily	Headway (Approx.)
168	Weekdays: 33 WB & 33EB Saturday: 18 WB & 18 EB Sunday: 14 WB & 14 EB	Weekdays: 4:30 a.m. to 12:30 a.m. Saturday: 6 a.m. to midnight Sunday: 7 a.m. to 9:30 p.m.	Weekday: 30 to 60 minutes Weekends: 60 minutes
143 (Express)	Weekdays: 6 NB & 5 SB Weekends: None	NB: 5:30 a.m. to 6:30 p.m. SB: 5 p.m. to 6:30 p.m.	20 minutes
907 (DART)	Weekdays: 6 NB & 5 SB Weekends: None	NB: 7:50 a.m. to 5 p.m. SB: 6:30 a.m. to 3:30 p.m.	60 to 120 minutes

Source: <http://metro.kingcounty.gov> (2015)

Figure 4.9 - Maple Valley Transit Service Characteristics

Route 168

Route 168 is the primary all-day transit route connecting the City to Kent and Maple Valley's Four Corners area generally along the SR 516 corridor. From Kent, riders can transfer to a variety of routes including the frequent Route 150 and Sounder commuter rail. Headways range from approximately 30 to 60 minutes on weekdays with 60-minute headways during the weekend. In 2014, Route 168 had 1,700 weekday boardings, up from 1,380 boardings in 2010.

Route 143(Express)

During peak weekday time periods, Metro Route 143 replaces Route 907, providing express service into or out of downtown Seattle. The route operates six northbound morning trips and five afternoon southbound trips (See Figure 4.9) with headways of approximately 20 minutes. Average total daily boardings in 2014 was approximately 600, up from 490 boardings in 2010.

Route 907 (DART)

Route 907 provides Dial-a-Ride Transit (DART) service between the Renton Park-and-Ride and the City of Enumclaw via SR 169 during weekdays. Route 907 is a DART route, allowing passengers to request service deviations from the route to improve access to their travel destination. The route operates from 5:30 am to 6:30 pm (excluding the peak hour times that Route 143 replaces Route 907) and only on weekdays. Headways range from 60 to 120 minutes. Based on 2014 data, average total daily boardings are approximately 100 passengers per day.

Maple Valley Park-and-Ride Lot

There are two Park-and-Ride lots located within the City of Maple Valley. Metro Transit maintains the Maple Valley Park-and-Ride located northwest of the SR 169/SE 231st Street intersection. Both Routes 143 and 907 serve this lot. The Park-and-Ride lot has a capacity for 122 spaces, which on average has been historically filled near or above 90 percent occupancy by 9:00 am. A second Park-and-Ride is located at the Maple Valley Town Square (Four Corners area) with a capacity of 97 parking spaces. This Park-and-Ride lot is served by Routes 143, 168, and 907. This lot is well utilized



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at 69 percent, with additional capacity for ridership growth. Figure 4.10 summarizes Maple Valley Park-and-Ride use statistics.

Lot	Demand (vehicles)	Capacity (spaces)	Percent Occupancy
Maple Valley Park-and-Ride	110 (103)	122 (122)	90% (84%)
Maple Valley Town Square	67 (N/A)	97 (N/A)	69% (N/A)

Source: King County Metro Transit, Q4 2009 and Q4 2014.

Note: 2009 usage statistics shown in parenthesis; (N/A) = data not available due to new lot.

Figure 4.10 - 2014 Maple Valley Transit and Park-and-Ride Use Statistics

Vanpool/Carpooling Service

To reduce the traffic volumes on Maple Valley roadways, Metro Transit offers tools to encourage carpooling and vanpooling. Carpooling and vanpooling arrangements vary in cost and complexity depending on the number of persons involved. More information can be found on Metro Transit's website (<http://metro.kingcounty.gov/>).

Regional Transit Service

Maple Valley lies outside the Regional Transit Authority boundaries. As a result, no additional service is currently scheduled for Maple Valley by Sound Transit. Regional express bus service is provided through the Cities of Kent and Renton via SR 167, and commuter rail service is provided via Kent and the City of Tukwila. Commuter rail operates during morning and evening peak hours between Lakewood (south of Tacoma in Pierce County) and Everett via Seattle. Both services provide links to high-capacity transit including Link Light Rail.

Non-Motorized Facilities

The City has major regional non-motorized trails near or within the City limits that act as "arterials" for non-motorized travel. The Cedar River Trail follows the Cedar River from the City of Renton upriver past the northern boundaries of Maple Valley to the community of Landsburg. At Maple Valley the trail intersects the Green-To-Cedar Rivers Trail, which runs through central Maple Valley along Lake Wilderness Park and continues south to the Four Corners area. There are numerous access points along each trail.

In the commercial areas such as Wilderness Village and Four Corners, sidewalks are present along most streets. Outside of these areas, formal pedestrian and bicycle transportation facilities are limited to residential developments constructed in the past 15 years or recent street improvement projects. The City has committed a portion of their annual budget to implement non-motorized improvements as identified in the City's adopted Non-Motorized Plan. Portions of planned major street projects also include elements to improve non-motorized facilities. More details on adopted City plans for pedestrian and bicycle facilities are provided in the *Maple Valley Non-motorized Transportation Plan* (March 2013).

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TRAVEL FORECASTING AND ALTERNATIVE ANALYSIS

The Transportation Systems Plan portion of the Transportation Element is partially developed based on the evaluation of the existing transportation system. The analysis of the existing transportation system identified locations with current operational, safety, and alternative transportation mode deficiencies.

To provide a framework for future transportation system needs, the plan must also consider the transportation needs of future growth. The Growth Management Act (GMA) requires that the transportation planning horizon be at least ten years in the future. The City of Maple Valley selected a 2030 horizon year for the plan. Year 2030 provides a long range look at the transportation system needed to support anticipated growth in the City and other communities in Southeast King County. Travel forecasts have been developed and analysis has been conducted for average weekday conditions during the PM peak hour. The weekday PM peak hour generally has the highest overall traffic volumes in the community and thus provides the basis for identifying capacity related improvement needs.

The primary analysis of 2030 travel forecasts was initially based on the following travel forecasting assumptions:

- Improvement projects in the City of Maple Valley's Transportation Improvement Plan (TIP).
- Improvement projects in TIPs from adjacent jurisdictions.
- Puget Sound Regional Council's Transportation 2040 Plan compilation of regional projects.
- City of Maple Valley existing and future land use data.
- Land use forecasts from adjacent jurisdictions.

Based on these assumptions, travel forecasts were developed using Maple Valley's travel demand model. The model is a tool that is used to convert existing and future land uses into traffic volumes. Alternative roadway and intersection projects were then evaluated in order to understand the effect they would have on travel patterns within the study area and their ability to resolve existing and future capacity deficiencies. The following provides an overview of the land use assumptions, travel demand model, and the alternatives analysis used in preparing the travel forecasts. The resulting travel forecasts are then presented. The travel forecasts provide a technical basis for identifying the transportation improvement projects in the transportation systems plan.

Land Use Assumptions

A strong relationship exists between land uses and the transportation facilities necessary to provide mobility within the community. Land use and transportation influence one another. Future transportation improvements recommended in the Transportation Systems Plan have been defined to support the Land Use Plan.



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The base year (2010) and forecast year (2030) land use totals were compiled or estimated from a variety of sources, including data from PSRC and the King County Assessor. These data sets were supplemented with local agency information and GIS datasets from the Cities of Maple Valley, Covington, and Black Diamond. The 2030 forecast land use was updated based on the information available in 2015, such as the Tahoma High School relocation in south Maple Valley and the Hawk Property in Covington.

Figure 4.11 summarizes the 2010 and 2030 total households and employment within the study area. The study area includes areas surrounding the City, which have been referred to as subareas. These subareas are based on the boundaries of the transportation analysis zones (TAZs) within the City's travel demand model. The subareas were defined to help in understanding general land use assumptions used in the development of the travel forecasts. The subareas include both neighboring cities, as well as unincorporated King County. Subareas one through three encompass the communities of Maple Valley, Covington, and Black Diamond. The remaining subareas encompass parts of Renton, Kent, Auburn, and unincorporated King County. The subareas provide a summary of existing and forecast land use growth within the study area.

Land Use Subareas ¹	Total Households ²			Total Employment ³		
	2010	2030	Annual Growth (2010-2030)	2010	2030	Annual Growth (2010-2030)
1. City of Maple Valley	7,914	10,377	1.4%	2,776	7,575	5.1%
2. Covington Area	6,493	12,655	3.4%	3,815	7,907	3.7%
3. Black Diamond Area ⁴	2,243	9,578	7.5%	684	3,956	9.2%
4. SW King County Area	4,313	8,323	3.3%	898	1,451	2.4%
5. Kent/Auburn Area	19,562	23,477	0.9%	5,417	8,362	2.2%
6. NW County Area	3,151	3,953	1.1%	1,188	1,884	2.3%
7. North County Area	2,050	2,884	1.7%	732	515	-1.7%
8. East County Area	2,535	4,521	2.9%	688	1,457	3.8%
9. Renton Area	14,807	18,985	1.3%	5,496	10,672	3.4%
Study Area Total	63,068	94,753	2.1%	21,694	43,779	3.6%

Source: Data sets provided by TSRC, King County Assessor, and the Cities of Maple Valley, Covington, and Black Diamond.

1. Land use subareas are based on aggregations of study area TAZ data.

2. Dwelling units.

3. Number of employees.

4. Based on the major development plans for Lawson Hills and The Villages.

Figure 4.11 - Study Area Land Use and Socio-Economic Data (2010 to 2030)

Figures 4.12 and 4.13 illustrate land use growth in four districts within the City. A more detailed land use table was prepared that summarizes the data by TAZ, which was then incorporated into the City's travel demand model. While the forecast land use data is for year 2030, it is based upon the



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existing City Land Use Element and allocated growth targets. The 2030 land use forecasts have been interpolated from 2022 to 2030 based on an updated GIS inventory of buildable lands within the City.

Land Use Summary Districts ¹	Total Households ²			Total Employment ³		
	2010	2030	Annual Growth (2010-2030)	2010	2030	Annual Growth (2010-2030)
1. North SR 169 Corridor	2,176	2,914	1.5%	1,283	2,972	4.3%
2. Four Corners	778	1,738	4.1%	1,021	3,363	6.1%
3. Witte Road Corridor	2,824	3,195	0.6%	226	226	0.0%
4. South City Area	2,136	2,530	0.9%	246	1,014	7.3%
City Total	7,914	10,377	1.4%	2,776	7,575	5.1%

Source: City of Maple Valley

1. See Figure 4.13. Land use districts are based on aggregations of study area TAZ data. Districts were developed for illustrative purposes only.
2. Dwelling units.
3. Number of employees.

Figure 4.12 – City Land Use and Socio-Economic Data (2010 to 2030)



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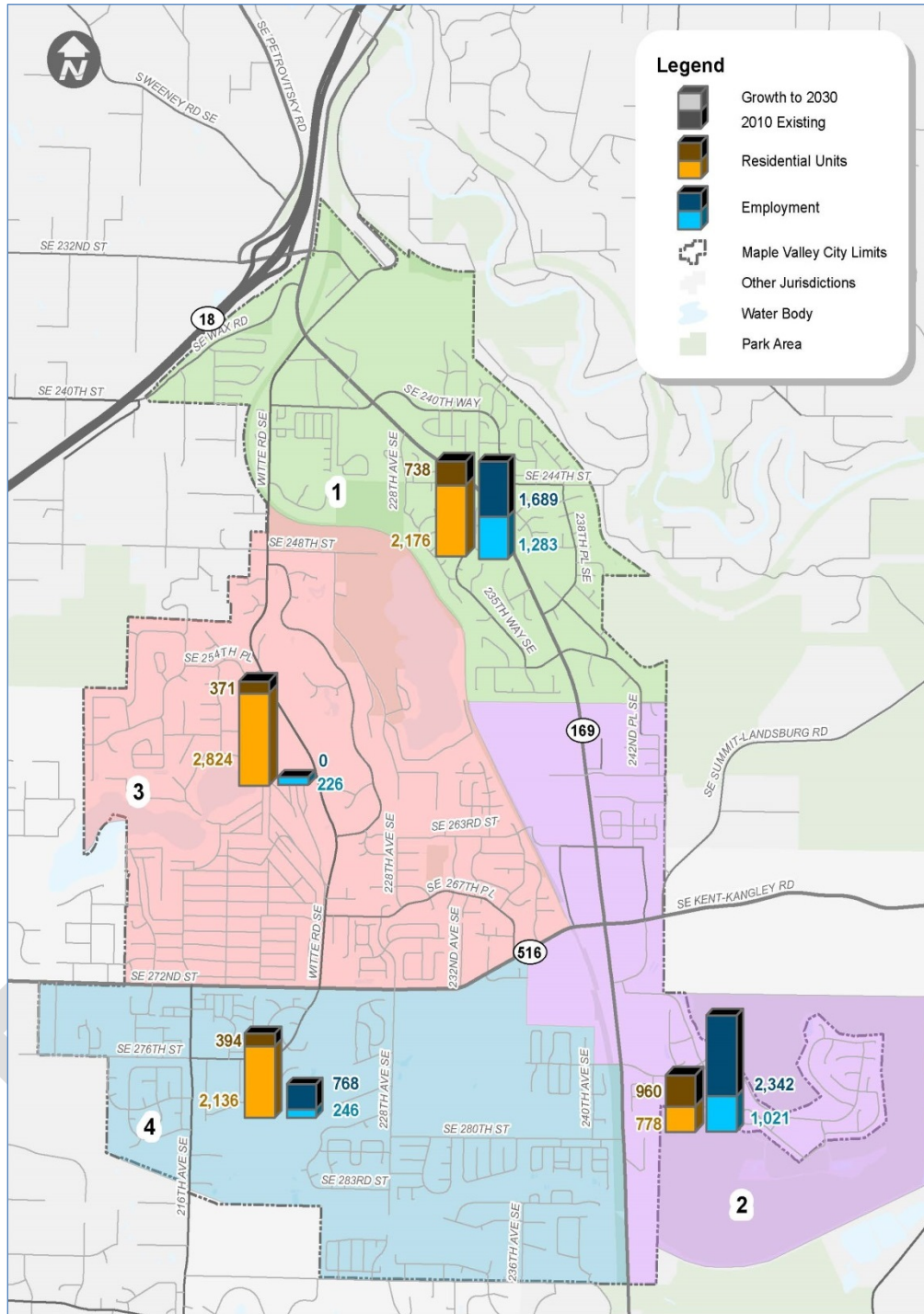


Figure 4.13 - City Land Use Growth by District (2010 to 2030)



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Household Growth Key Findings

The following summarizes key findings of the household growth:

- The full study area, including the City of Maple Valley, is estimated to grow by more than 31,600 dwelling units by 2030, representing an annual growth of 2.1 percent.
- Approximately 7,900 dwelling units were in the City in 2010.
- Within the City, the number of housing units is forecast to grow by more than 2,400 dwelling units, an annual growth of 1.4 percent between 2010 and 2030. This is a smaller rate of growth than is projected for most of the surrounding communities.
- In the Covington area, the number of housing units is forecast to grow by more than 6,100 dwelling units, an annual growth of 3.4 percent between 2010 and 2030.
- In the Black Diamond area, the number of housing units is forecast to grow significantly by more than 7,200 dwelling units, an annual growth of 7.5 percent between 2010 and 2030.
- In surrounding unincorporated areas of King County, household growth is estimated to grow annually between 1.1 to 3.3 percent.

Employment Growth Key Findings

The following summarizes key findings of the employment growth.

- 3.6 percent growth in employment within model study area.
- Total employment within the City is expected to more than double by 2030, from approximately 2,780 to 7,600 employees. This represents an annual rate of 5.1 percent.
- A majority of the growth in employment is projected to be in the retail (increase of 2,160 employees) and service (increase of 2,340 employees) categories.
- Growth in employment outside of the City is also estimated to double in the next 20 years. The large employment growth in the overall study area results in more than 22,000 new jobs by 2030.
- The City of Covington is estimated to continue to grow and attract jobs at a 3.7 percent annual rate.
- The City of Black Diamond is estimated to add over 2,200 jobs mostly in the service categories. This represents an annual rate of 9.2 percent from 2010 conditions.

Summit Place

Summit Place refers to the area previously referred to as the “Donut Hole” which is currently owned by King County. The area today includes a former golf course and road maintenance facility. A small neighborhood is also included in the district on the north side of the County property, just south of SR 516. King County and the City of Maple Valley formed an interlocal agreement to adopt a Joint Plan for Summit Place in 2010. Since 2010 the development plans for this area have changed to include the relocated Tahoma High School, no new homes, and new businesses that could include up to 580 new employees. This is compared to 1,600 new homes and businesses with 730 new employees assumed in 2010.



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City of Black Diamond

The land use growth expected to occur in the City of Black Diamond is an important consideration in developing the land use forecasts for Maple Valley. The land use growth assumed for Black Diamond is consistent with the major development plans for Lawson Hills and The Villages, two master planned communities that have been approved. As part of the development plans, two Environmental Impact Statements (EIS) were prepared by the City of Black Diamond that provided detailed land use data for each planned development. The information contained within each EIS was integrated into the Maple Valley travel demand model and is accounted for in the land use assumptions. The number of households and employees is expected to grow between 7 to 9 percent annually in the Black Diamond area due to these anticipated developments. To improve consistency between Black Diamond and Maple Valley planning efforts, the travel demand model forecasts were further refined to match the net new vehicle trips generated by the proposed development.

Travel Forecasting Model

A travel demand forecasting model was developed to assist in defining future transportation system needs. The model was constructed as part of the Transportation Element update. It is based on the City's previous model, but has been updated to reflect current conditions and forecast land use projections. The model uses the VISUM software package and forecasts weekday PM peak hour traffic volumes based on the 2030 land use forecasts. The model study area includes Black Diamond, Covington, and parts of Kent and unincorporated King County.

The model was calibrated to match existing base year traffic volumes (2010) and then used to develop a baseline 2030 traffic forecast. City, County, and State transportation improvement projects likely to be funded and built by 2030 were included in the future baseline model. To understand the need of City projects, the 2030 baseline model only includes City projects that are in design, construction, or recently built. The improvements were defined based on local agency Transportation Improvement Programs and the PSRC's Transportation 2040 Plan compilation of regional projects. The baseline projects were input into the travel demand model and the 2030 baseline forecasts were prepared. The 2030 baseline travel forecasts were used to determine where future operational and capacity deficiencies were likely to occur. A brief description of the baseline transportation projects are listed below.

Baseline Transportation Projects

- SR 169
SR 169 from Witte Road SE to 228th Avenue SE – Construct second southbound lane (now constructed as of 2015 update).
- Witte Road SE
Witte Road SE from SE 244th Place to SE 249th Place – Widen roadway, add sidewalks, and construct roundabout at SE 248th Street intersection (now constructed as of 2015 update).
- SR 516



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SR 516 from 160th Avenue SE to 164th Avenue SE – Add turn lanes and modify traffic signals.

- SR 18
SR 18 from Issaquah-Hobart Road to I-90 – Construct 4-lane divided highway.
- Four Corners
Four Corners area circulation roadways – Construct local streets per anticipated development.
- Summit Place
Summit Place area circulation roadways – Construct local streets per anticipated development.
- Black Diamond
Black Diamond area roadway improvements – Construct street improvements per anticipated developments and City of Black Diamond plans.

Baseline Analysis

The future baseline traffic analysis identified the need for transportation improvements throughout the City. Due to the residential and employment growth assumed to occur in the City, and the growth that is expected in Black Diamond, traffic volumes are estimated to increase significantly on the major corridors in the City such as SR 169, SR 516, Witte Road, and 216th Avenue SE. While the baseline improvement projects were assumed to be in place by 2030, the traffic forecasting and operations analysis highlighted the need to consider additional transportation investments throughout the City.

To address the issues identified in the baseline traffic analysis, improvement alternatives were identified by City staff. The improvement alternatives were evaluated using the City's travel demand model to determine whether the projects addressed the future deficiencies identified in the baseline analysis. The results of the alternatives analyses were used in developing a recommended 2030 transportation network with improvements.

Alternatives Analysis

Several proposed roadway connections and major highway widening projects were defined and added to the future baseline model. Separate model scenarios were created for the alternatives in order to evaluate the shifts in traffic and levels of service due to the proposed roadway connections or widening projects. Results from each alternative model scenario were reviewed in order to understand whether the proposed projects:

- Provided congestion relief along adjoining roadways and at intersections.
- Attracted a significant amount of vehicle trips to justify the need for the roadway.
- Reduced impacts on non-arterials.
- Supported future growth within the City.

**TRANSPORTATION**

Support Analysis

North City Connections

The improvements evaluated in the northern area of the City included two new road connections, further widening of SR 169 north of Witte Road SE, and spot improvements at the SR 169/Witte Road SE intersection.

The new SE 231st Street Connection will serve new development east of the Wilderness Village commercial area and create another north-south collector street. The specific alignment is dependent on developments in the area, and the intersection designs at either end of the corridor will need more detailed analysis once the alignment is identified. The SE 231st Street connection between Witte Road SE and SE 240th Way provides a new alternate north-south route east of SR 169. The amount of traffic that uses this new connection depends on the adjacent land use intensity, the roadway design (speed and lanes), and the congestion levels on SR 169. It is recommended to remain in the City's plan.

In addition to the SE 231st Street Connection, the SE 240th Street Extension, adding a third southbound lane along SR 169, and spot improvements at the SR 169/ Witte Road SE intersection all address future congestion along SR 169 between SE Wax Road and Witte Road SE. One way to address the issue is to add additional capacity along SR 169 (third southbound lane). Alternatively, the SE 240th Street Extension draws traffic volumes away from this segment of SR 169. The spot improvements at the SR 169/Witte Road SE intersection also reduce traffic bottlenecks along this section. The 240th Street NE extension to SE Wax Road continues to provide a major benefit to SR 169 intersection in north Maple Valley. Without this connection, traffic volumes along SR 169 at SE Wax Road and Witte Road SE would significantly increase. It is recommended that the SE 240th Street Extension be used to address congestion rather than widening SR 169 to three lanes in one direction. The SE 240th Street Extension also improves connectivity in the areas for both motorized and non-motorized travel.

The type of spot improvements to the SR 169/Witte Road SE intersection (turn lanes, signal control, or turn restrictions) depend on other projects, such as completion of the SE 231st Street Connection and major developments. A more detailed feasibility and circulation study is recommended prior to any design and construction, and would not occur until completion of the SE 231st Street Connection.

The SE 231st Street Connection, SE 240th Street Extension, and potential intersection improvements to the SR 169/Witte Road SE intersection were all carried forward into the plan project list.

SR 169 Corridor

Based on the 2011 Transportation Element analysis, it was recommended that SR 169 be five lanes between Witte Road SE and SE 280th Street. South of SE 280th Street it was recommended that SR 169 be widened in the southbound direction only until the City Limits. Since 2011, the City has made significant progress in adding this capacity to SR 169. Recent improvements include southbound widening between Witte Road SE and 228th Avenue SE, widening in both directions between SE 260th Street and SE 264th Street, and southbound widening between SE 271st Place and SE 276th



TRANSPORTATION

Support Analysis

Street. In addition, additional street network has been added in the Four Corners area that helps to remove local circulation trips from off the State highway. The alternatives analysis confirmed the need to continue to expand capacity along SR 169 as envisioned in the 2011 Transportation Element.

New development in the Four Corners area requires a well-defined interconnected street network to disperse traffic volumes and avoid overloading any one local access road. Similarly, direct access to SR 169 should be provided at regular intervals to avoid concentrating volumes at any one intersection. For example, this may include quarter-mile spacing of traffic signals, and one limited-access unsignalized intersection between signals. This has already occurred in many parts of the Four Corners area, but is particularly recommended in the area northwest of the SR 169/SE 264th Street intersection. As this area develops and as SR 169 is further widened north of SE 260th Street, it is recommended that a traffic signal be added at the intersection of SR 169 and SE 260th Street.

SR 169 widening in the two- to three- lane sections between SE 240th Street and SE 280th Street was carried forward into the transportation systems plan. The widening was divided into multiple projects that could be implemented over time as funding is available.

SR 516 Corridor

Based on the 2011 Transportation Element analysis, it was recommended that additional widening along the SR 516 corridor was needed. In addition, the extension of SE 271st Street (and associated local street connections to Summit Place) was recommended to avoid the need of expanding SR 516 to five lanes. The alternatives analysis confirmed the need to continue to expand capacity along SR 516 as envisioned in the 2011 Transportation Element.

On the west section of the corridor, the model indicated that widening SR 516 beyond a three-lane facility was entirely dependent on whether SR 516 was widened to five-lanes through the City of Covington. If it was widened to five-lanes, the modeling indicated the logical terminus of the five-lane widening would be at 216th Avenue SE. A significant amount of future demand is forecasted to use 216th Avenue SE, therefore only three-lanes are necessary along SR 516 to the east.

A new 228th Avenue SE connection across the railroad corridor in south Maple Valley would benefit residents south of the railroad corridor and reduce traffic demands at key locations along the SR 516 corridor. Traffic volumes would be reduced on 216th Avenue SE, SR 169, and at the intersection of SR 516 and Witte Road SE. In other words, this connection would help reduce traffic volumes at typically congested locations.

The SE 271st Street Extension, SR 516 widening to five-lanes between the western City limits and 216th Avenue SE, SR 516 widening to three-lanes between 216th Avenue SE and 236th Place SE (terminus of the SE 271st Street Extension), and the 228th Avenue SE railroad crossing were all carried forward into the transportation systems plan project list.

Witte Road Spot Improvements



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Support Analysis

Based on outcomes of the Witte Road Corridor Study Update (February 2014), the intersections of Witte Road SE with SE 254th Place, 220th Avenue SE, and SE 268th Street would be improved to address some alignment and safety concerns. The alternatives analysis did not suggest any changes to the recommendations, and these improvements have been carried forward into the plan project list.

Traffic Forecasts

The results of the alternatives analysis were used to develop the framework for the recommended transportation network and ultimately the transportation systems plan. A recommended transportation network model scenario was created to estimate forecast 2030 traffic volumes within the City. The resulting 2030 daily and PM peak hour traffic forecasts are shown in Figure 4.14.

In general, forecast PM peak hour traffic volumes on SR 169 are expected to increase significantly with the widening of SR 169 to a five-lane highway through the City. Along SR 516, forecast traffic volumes are expected to increase by 80 percent due to the added capacity of widening it the corridor to five lanes west of 216th Avenue SE and the increased land use in Four Corners and Black Diamond.

Traffic volumes on Witte Road SE are forecasted to grow moderately partially due to the completion of the SE 240th Street Extension. Along 216th Avenue SE, south of SR 516, the forecast traffic volumes will continue to increase in the future due primarily to growth in Black Diamond.

The Four Corners area is estimated to have a significant increase in traffic volumes. New circulation roadways in the area provide alternatives to the state highways. The new SE 271st Street Extension is expected to attract over 500 vehicles in the future, enough to avoid widening SR 516 to five lanes east of 216th Avenue SE. The circulation roadways will help relieve future congestion at the SR 169/SR 516 intersection and reduce the need to widen the intersection beyond five lanes on each approach.

Compared to the forecasted 2030 volumes shown in the 2011 Transportation Element, most daily and PM peak hour traffic volumes are slightly lower in this 2015 update. This is due to some minor changes in 2030 land use assumptions within and outside the City as well as a the new 228th Avenue Connection. The main exception is a slight increase in traffic volumes on SR 516 between Witte Road SE and SR 169.

The resulting traffic forecasts were evaluated using the City's traffic operations model to identify the resulting levels of service (LOS).



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Support Analysis

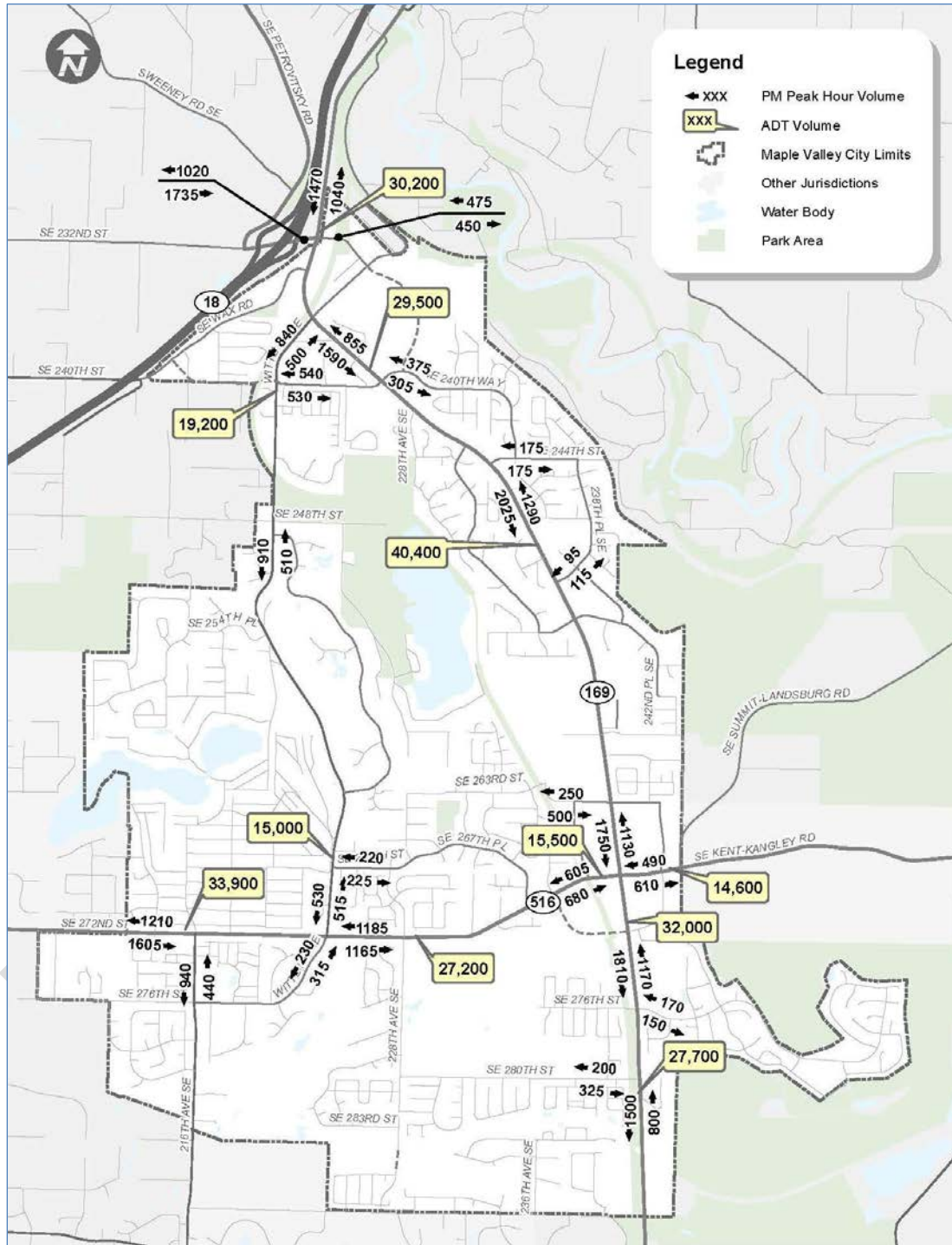


Figure 4.14 - Future (2030) Daily & PM Peak Hour Traffic Volumes



TRANSPORTATION

Support Analysis

Level of Service Standards

LOS standards establish the basis for the concurrency requirements in the GMA, while also being used to evaluate impacts as part of the State Environmental Protection Act (SEPA). Agencies are required to “adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with development” (RCW 36.70A.070(6)(b)). Therefore, setting the LOS standard is an essential component of regulating development and identifying planned improvements for inclusion in the Transportation Element.

Level of Service Definitions

Level of service is both a qualitative and quantitative measure of roadway and intersection operations. Level of service uses an “A” to “F” scale to define the operation of roadways and intersections as follows:




LOS A: Primarily free flow traffic operations at average travel speeds. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delays at signalized intersections are minimal.

LOS B: Reasonably unimpeded traffic flow operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and control delays at signalized intersections are not significant.

LOS C: Stable traffic flow operations. However, ability to maneuver and change lanes may be more restricted than in LOS B, and longer queues, adverse signal coordination, or both may contribute to lower than average travel speeds.

LOS D: Small increases in traffic flow may cause substantial increases in approach delays and, hence decreases in speed. This may be due to adverse signal progression, poor signal timing, high volumes, or some combination of these factors.

LOS E: Significant delays in traffic flow operations and lower operating speeds. Conditions are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and poor signal timing.

LOS	What it Looks Like
A	
B	
C	
D	
E	
F	



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LOS F: Traffic flow operations at extremely low speeds. Intersection congestion is likely at critical signalized intersections, with high delays, high volumes, and extensive vehicle queuing.

If expected funding for improvements to meet future transportation needs is found to be inadequate and the City will not be able to meet their adopted LOS standard, then the City may pursue one or more of the following options:

- Lower the LOS standard for the system or for portions of the system that cannot be improved without a significant expenditure;
- Revise the City's current land use element to reduce density or intensity of development so that the LOS standard can be met; or,
- Phase or restrict development to allow more time for the necessary transportation improvements to be completed.

State Highway Level of Service Standards

The City of Maple Valley is served by SR 169 and SR 516. SR 169 is classified as a Highway of Statewide Significance (HSS). Per WSDOT's Highway Systems Plan, the LOS standards for HSS facilities are set forth by State law. State law sets LOS D for HSS facilities in urban areas and LOS C for HSS facilities in rural areas. Since SR 169 is located within the Maple Valley urban area, the LOS D standard applies. GMA concurrency requirements do not apply to HSS facilities, per State legislation.

SR 516 is a State Highway of Regional Significance, Tier 2. The level of service standard for regionally significant state highways in the central Puget Sound region is set by PSRC in consultation with WSDOT and the region's cities and counties. PSRC has established LOS D for SR 516 between SR 169 in Maple Valley and SR 515 in Kent. PSRC notes that it will measure the level of service for regionally significant state highways on a one-hour PM peak period basis. Furthermore, PSRC notes that local agencies will need to decide whether to apply concurrency to state highways of regional significance.

City of Maple Valley Level of Service Standards

The baseline traffic analysis showed the primary areas of congestion and capacity deficiencies within Maple Valley are expected along the SR 169, SR 516, and Witte Road corridors. The SR 169 and SR 516 corridors serve regional travel in addition to serving as primary travel corridors for Maple Valley. The alternatives analysis illustrated a need for significant improvements to both SR 169 and SR 516. In order to move these projects forward, significant new funding will be required from local, regional, and state sources. Individual intersections along these state highways will likely fall below the LOS D standards set by the State and PSRC prior to the City obtaining adequate regional and local funding for the needed improvements.

To address these concerns, the City redefined its level of service standards in 2010. The City's standards are divided into two parts. The first part is based on the weighted average level of service of key intersections along the two state highways. This will be used for concurrency review and monitoring of overall traffic operations. The second part of the level of service standard covers all other intersections in the City.



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Concurrency Level of Service Standards

The City has identified two groups of intersections on SR 169 and SR 516 as being the most critical in the overall operation of its transportation system. These include intersections in the north part of the City along SR 169 and in the south part of the City along SR 516.

North Concurrency Intersections

- SR 169 @ 231st Street
- SR 169 @ Wax Road
- SR 169 @ Witte Road
- SR 169 @ 240th Street

South Concurrency Intersections

- SR 516 @ SR 169
- SR 516 @ Witte Road
- SR 516 @ 216th Avenue

The City has established a standard of LOS D, based on the weighted average delay per vehicle, for the north and south groups of intersections. The levels of service for each individual intersection are calculated for the weekday PM peak hour using the Highway Capacity Manual, 2010 signalized intersection control delay methodology. The weighted average is calculated by summing the total delays at the group of concurrency intersections and then dividing by the sum of the total entering volumes for the same intersections. The weighted average is computed using the following equation for each concurrency group:

$$\text{Weighted Average} = \frac{\sum_{i=1}^n d_i * TEV_i}{\sum_{i=1}^n TEV_i}$$

where

- d_i = average delay in seconds per vehicle for each intersection
- TEV_i = total entering volume for each intersection
- i = concurrency intersection

The use of the weighted average delay for these groups of intersections provides an overall measure of how these two key state highways are operating. The methodology allows one or more of the intersections in each group to operate below LOS D, while still maintaining an overall average of LOS D or better.

Other Intersection Level of Service Standards

In addition to the use of a LOS standard based on the weighted average delay for the seven state highway intersections, the City also has established level of service standards for all other intersections (including other intersections along the state highways) in the City. The City will apply these standards to the weekday PM peak hour and to other time periods as appropriate based on the type and location of development.

- Signalized, Roundabout, and All-way Stop Controlled Intersections

**TRANSPORTATION**

Support Analysis

LOS D or better based on the average performance of all traffic movements at the intersection consistent with the methodologies in the *Highway Capacity Manual*, 2010.

- Two-way, Stop Controlled, Unsignalized Intersections

LOS D or better; except for two-way, stop controlled, unsignalized intersections with SR 169, SR 516, or Witte Road which is LOS E for the side street approaches. The LOS is based on the average delay per vehicle for each approach or separate traffic movement at the intersection using the methodologies in the *Highway Capacity Manual*, 2010. On a case-by-case basis the City may allow the level of service for traffic movements from the minor street at a two-way, stop controlled intersection to operate below the adopted standard if the Public Works Director (or designee) determines that no significant safety or operational impacts will result. As appropriate, mitigation will be identified and required to address potential impacts to safety or operations. Potential installation of traffic signals or other traffic control devices at these locations shall be based on the *Manual on Uniform Traffic Control Devices (MUTCD)*, the Transportation Element, and sound engineering practices. This allowance within the level of service standards is needed because the installation of a traffic signal or other traffic control device may not be warranted per the MUTCD or desirable based on the proximity of other current or planned traffic controls as identified in the Transportation Element.

Future Traffic Operations

2030 forecast traffic volumes for two transportation network conditions were analyzed: (1) baseline improvement projects only, and (2) with plan improvements. The results of the future baseline LOS analysis were used to develop the framework for the recommended transportation network, and ultimately, the long-term project list. The analysis provides a summary of future traffic operations with and without the long-term improvement projects, which are summarized in the transportation systems plan section of the Transportation Element.

The LOS analysis was conducted for the 2030 horizon year similar to the analysis conducted for the existing traffic conditions, but also included a review of the concurrency LOS measure. Figures 4.15, 4.16, and Figure 4.17 summarize the forecast intersection operations for baseline and with improvement scenarios during the average weekday PM peak hour.



Element 4

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Support Analysis

Intersection	2030 Baseline			2030 With Improvements		
	LOS ¹	Delay ²	Ctrl ³	LOS	Delay	Ctrl
<u>North Concurrency Intersections</u>						
SR 169/ SE 231st St	D	53	Signal	D	50	Signal
SR 169/ SE Wax Rd	F	115	Signal	C	22	Signal
SR 169/ Witte Rd SE	F	150	Signal	E	69	Signal
SR 169/ SE 240th St	D	47	Signal	E	57	Signal
Weighted Average⁴	F	95		D	49	
<u>South Concurrency Intersections</u>						
SR 169/ SR 516	F	99	Signal	E	77	Signal
SR 516/ Witte Rd SE	E	78	Signal	D	45	Signal
SR 516/ 216th Ave SE	D	46	Signal	C	25	Signal
Weighted Average⁴	E	78		D	51	

1. Level of Service, based on 2010 Highway Capacity Manual methodology.

2. Average delay in seconds per vehicle.

3. Intersection control: "Signal" is traffic signal; "Stop" has stop signs on minor street; "Round" is roundabout intersections.

4. Weighted average is calculated by summing the total delays at the group of concurrency intersections and then dividing the sum of the total entering volumes for the same intersections.

Figure 4.15 - 2030 Weekday PM Peak Hour Concurrency LOS

As shown in Figure 4.16, the weighted average intersection LOS for the North and South Concurrency Intersections is improved with completion of the long-term transportation projects. Without implementation of the long-term projects, the weighted average intersection LOS for the North and South Concurrency Intersections would fall below the City's LOS D standard.

In addition to the weighted average LOS, most of the individual concurrency intersections will also operate at LOS D or better with implementation of the full project list. Three intersections that still operate below LOS D with the improvements will be along SR 169 at Witte Road SE, SE 240th Street, and SR 516. These intersections are expected to operate at LOS E by 2030 with improvements. However, as noted above, the weighted average delay of the North and South Concurrency Intersections would be LOS D, thereby meeting the City's LOS standard.



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Support Analysis

Intersection	2030 Baseline			2030 With Improvements		
	LOS ¹	Delay ² (WM) ³	Ctrl ⁴	LOS	Delay	Ctrl
SR 169/ SE 244th St	D	32 (WB)	TWSC	A	9	Signal
SR 169/ SE 251st St	E	43 (WB)	TWSC	F	81 (WB)	TWSC
SR 169/ SE 264th St	D	42	Signal	D	55	Signal
SR 169/ SE 271st St	B	19	Signal	D	42	Signal
SR 169/ SE 276th St	D	35	Signal	C	21	Signal
SR 169/ SE 280th St	C	25	Signal	B	12	Signal
SR 516/ 228th Ave SE	C	34	Signal	D	49	Signal
Witte Rd SE/ SE 240th St	B	13	Signal	D	42	Signal
Witte Rd SE/ SE 248th St	C	23	Round	C	21	Round
Witte Rd SE/ SE 254th Pl	F	66 (EB)	TWSC	A	4	Signal
Witte Rd SE/ SE 268th St	E	42 (WB)	TWSC	C	21 (WB)	TWSC
SE 231st St/ SR 18 NB Ramps	C	21	Signal	C	24	Signal
SE 231st St/ SR 18 SB Ramps	D	42	Signal	D	54	Signal
SE Kent-Kangley Rd/ 243rd Ave SE	F	>200 (SB)	TWSC	A	9	Signal

1. Level of Service, based on 2010 Highway Capacity Manual methodology.

2. Average delay in seconds per vehicle.

3. Worst movement reported for stop-controlled intersections.

4. Intersection traffic control: "Signal" is traffic signal; "TWSC" has stop signs on minor approach; "Round" is a roundabout.

Figure 4.16 - 2030 Weekday PM Peak Hour LOS at Non-Concurrency Intersections

Unsignalized, two-way, stop-controlled intersections not expected to meet City LOS standards include SE 254th Place at Witte Road SE and at SE Kent-Kangley Road at 243rd Avenue SE. The high volume of vehicles expected in 2030 along Witte Road SE and SE Kent-Kangley Road do not allow for many gaps in traffic for vehicles to enter from side streets. However, these intersections may not meet traffic signal warrants. The City will monitor operations and safety at these locations and may identify additional improvements or restrictions, as needed, consistent with the level of service standards.



Element 4 TRANSPORTATIONSupport Analysis

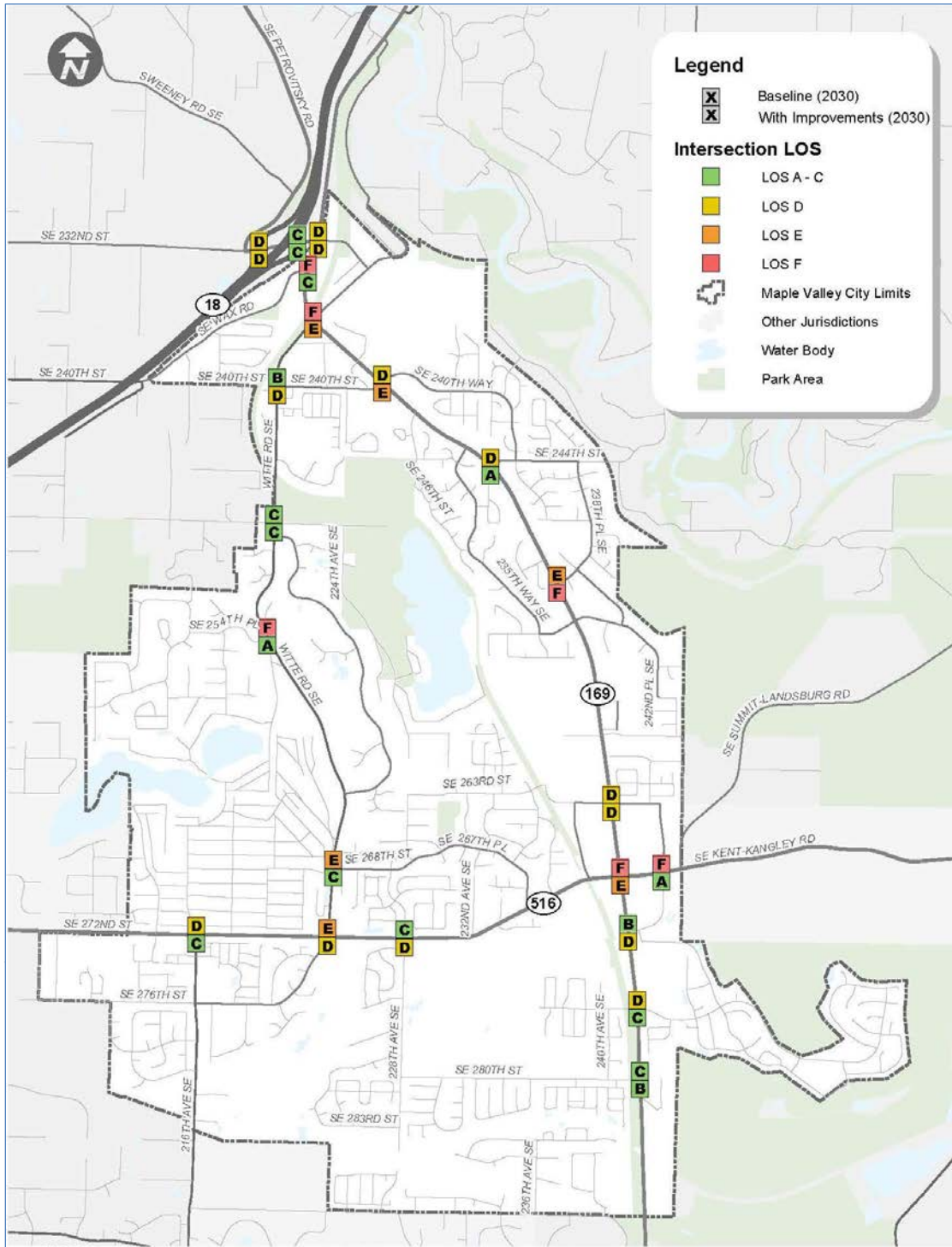


Figure 4.17 - (2030) PM Peak Hour Intersection Levels of Service

**TRANSPORTATION**

Support Analysis

TRANSPORTATION SYSTEMS PLAN

The transportation systems plan section of the Transportation Element provides a long-range strategy for the City of Maple Valley to address current and forecast transportation issues and identified needs, implement transportation goals and policies, and realize the intent of the community's Vision. The plan is based upon an analysis of the existing transportation system, forecasts of future travel demands, the anticipated availability of resources, and the desire of the City of Maple Valley to create an efficient transportation system that puts a priority on community livability. The plan builds upon the City's policies and standards and seeks to give specific shape to the City's transportation goals and vision.

The transportation systems plan focuses on four components of the transportation system:

- Streets and Highways.
- Public Transit and Travel Demand Management.
- Non-Motorized Facilities.
- Waterborne, Rail, and Air Transportation.

These are the basic elements of the transportation system upon which mobility within and through Maple Valley depends. The core of the transportation systems plan covers street and highway improvements with a focus on the major corridors within the City. The street system serves the primary movement of automobiles and truck traffic. The street system also provides the framework for other travel modes in the community, including transit, pedestrian, and bicycle modes.

Streets and Highways

Streets and highways serving Maple Valley provide for the general movement of people and goods. They also serve other travel modes, including pedestrians, bicyclists, and transit. The street and highway section identifies the functional roadway system, roadway design standards, designated truck routes, improvement projects and programs needed to maintain and expand the system, and general guidelines and strategies on access management.

Functional Classification

Roadway functional classification provides for a hierarchy of roadways. These classifications also act as a guide for future development of the overall street system. The purpose of the functional classification plan is to provide a hierarchy of arterial and local streets. Arterial streets serve higher traffic volumes and may have few access points. Local streets provide neighborhood circulation and access to individual parcels. Collector streets link arterials and local streets and may provide access to individual parcels. A well-connected system of streets enhances overall mobility and facilitates greater opportunities for pedestrian and bicycle travel. The roadway classifications shown in Figure 4.19 include principal arterials, minor arterials, collector streets, and local and business access streets.



TRANSPORTATION

Support Analysis

The City roadway functional classification system is slightly different from the federal functional classification, particularly for roadways such as Witte Road, SR 516, and many of the collector streets. Witte Road is classified as a collector and SR 516 is classified as a minor arterial on the federal map. Other important collector streets are classified as local access streets or are not shown on the federal map, these include SE 240th Street, 228th Avenue SE, SE 231st Street and SE 280th Street.

Federal functional classification is one determinant of eligibility for federal transportation funding. All roadway projects using federal funds must be approved on the federally classified roadway system. Local access roadway projects are not eligible to use federal transportation funds unless they are a pedestrian or bicycle project, or a safety project using State transportation safety funds.

The City should prepare and submit an application to update the federal functional classification map so that it is consistent with the City classifications identified in Figure 4.18. The process includes review by both PSRC and WSDOT, with final approval by the Federal Highway Administration (FHWA). The changes should be focused on key corridors such as Witte Road, SR 516, SE 240th Street, 228th Avenue SE, SE 231st Street and SE 280th Street.

Functional Classification	Description
Principal Arterials	Regionally significant streets that link communities while also connecting important locations within the City. Principal arterials most often facilitate the system's largest traffic volumes. Access to local streets and driveways is discouraged.
Minor Arterials	Major streets that provide important intra-city connections, but may also play a regional role. Access to local streets is encouraged while driveway access is discouraged.
Collector Streets	Intra-community streets connecting residential neighborhoods with commercial and activity centers or principal and minor arterials. Driveway access is often provided along these routes.
Local and Business Access Streets	Streets providing circulation within neighborhoods or commercial areas and direct access to abutting properties.

Figure 4.19 - Functional Classification Definitions

Roadway Design Standards

The City of Maple Valley adopted Roadway Standards in 2004 which sets specific and consistent road design elements. The standards include items such as right-of-way needs, pavement width, type and width of pedestrian and bicycle facilities, and roadway and intersection radii. The standards also provide requirements for the location and installation of utilities within the right-of-way.

The standards are intended to support the City's goals in providing adequate facilities to meet the mobility and safety needs of the community, as well as complying with storm water management, sensitive areas, and other regulations. The standards are intended to assist design professionals and developers for all new and reconstructed roadways and right-of-way facilities, both public and private, within the City.



TRANSPORTATION

Support Analysis

Truck Routes

A significant amount of trucking activity occurs in the City due to the surrounding gravel mines and rock quarries east and south of the City. Local industry and surrounding forestry/agricultural uses generate truck traffic as well. Trucks have a significant impact on traffic operations, safety, and roadway maintenance. They also impact air quality and noise levels in the City. The City has designated only principal arterials and one minor arterial as truck routes. The 2004 Road Standards are defined to support truck use along these routes.

The primary routes for trucks traveling through the City are the two state highways: SR 169 and SR 516. The other truck route includes Kent-Kangley Road, east of the SR 516/SR 169 intersection at Four Corners. These routes provide connections from the surrounding land uses to the regional transportation system. SR 169 is the only north-south arterial for trucks heading between Black Diamond and Renton. SR 516 and Kent-Kangley Road provide an east-west arterial through the City. If trucks have an origin/destination within the City, they should limit travel on non-designated streets to the shortest practical travel route between the origin/destination and a designated truck route.

Transportation Improvement Projects

Based on the evaluation of existing and forecast traffic volumes, traffic operations, and safety, a recommended list of transportation improvement projects were defined. The improvements address safety, existing capacity deficiencies, and roadway preservation. They also cover upgrades to existing roads and construction of new roadways and interconnected street systems to support the forecast economic development and growth in the City and its UGA. The projects incorporate needs for pedestrians, bicyclists, and transit service that will use the same corridors. The projects were categorized into the following four types of projects:

- SR 169 Improvements (Maple Valley – Black Diamond Road SE).
- SR 516 Improvements (SE Kent-Kangley Road).
- Local Arterial Improvements.
- New Local Roadway Projects.

A brief description of each project is presented in Figure 4.20. Figure 4.21 shows the location of each project. Figure 4.20 identifies the roadway or intersection, the project limits, a description of the improvements, and a planning level cost estimate. A map identification number is included on the table to assist in referencing the projects shown on the figure.

Planning level cost estimates were prepared for each project based on typical per unit costs, by type of roadway and scope of the improvement. Where costs had been calculated as part of ongoing design projects, they were used instead. The cost estimates include allowances for right-of-way acquisition, based on generalized needs to meet the City's street standards. Adjustments to construction costs were included, as needed, to reflect any specific implementation issues, such as environmental impacts or impacts on adjacent properties.



TRANSPORTATION

Support Analysis

Key Project Changes in 2015 Transportation Element Update

The project list in Figure 4.20 was updated from the 2011 Transportation Element based on the 2015 conditions and updated analysis. Projects 101, 105, and 116 have been completed and were removed from the project list. Projects 108 and 111 were partially constructed and the project list has been updated to reflect the remaining portions of the projects. Project 108 includes the addition of a traffic signal at SR 169 and SE 260th Street. Project 132 is a new 228th Avenue SE connection across the BNSF railroad corridor. Project 133 is a new traffic signal or roundabout at SE Kent-Kangley Road/242nd Avenue SE to address a future LOS deficiency and improve local circulation in the Four Corners area.



Element 4

TRANSPORTATION

Support Analysis

Map ID	Title and Location	Description	Project Cost ¹ (\$1,000)
SR 169 Improvements (Maple Valley - Black Diamond Road SE)			
102	SR 169/Witte Rd SE Intersection	Investigate various design options at the intersection that would be dependent on other projects, such as completion of the SE 231st St Connection. Would require a more detailed feasibility and circulation study, and could not occur until completion of the SE 231st St Connection.	\$900
103	SR 169/SE 240th St Intersection	Construct second WB left-turn lane and EB right-turn lane. NB and SB approaches would both be one left-turn lane, one through lane, and one through/right-turn shared lane.	\$1,160
104	SR 169/SE 244th St Intersection	Install traffic signal to provide for improved operations and reasonable access from the minor approach (SE 244th St).	\$470
106	SR 169 Widening (Witte Rd SE to SE 244th St) <i>Phase C</i>	Construct second SB lane on SR 169 from 228th Ave SE to SE 244th St and second NB lane on SR 169 from 228th Ave SE to Witte Road SE. Provide center left turn lane/pockets where warranted. Provide curb, gutter, bike lanes, and sidewalks.	\$5,850
107	SR 169 Widening (228th Ave SE to SE 244th St) <i>Phase E</i>	Construct second NB lane on SR 169 from SE 244th St to 228th Ave SE. Provide curb, gutter, bike lane, and sidewalk on east side.	\$2,500
108	SR 169 Widening (SE 255th St to SE 260th St) <i>Phase D</i>	Extend second SB and NB lanes on SR 169 from SE 260th St to SE 255th St. Provide center left turn lane/pockets where warranted. Install traffic signal at the SE 260th St intersection. Provide curb, gutter, bike lanes, and sidewalks on both sides.	\$5,310
109	SR 169 Widening (SE 244th St to SE 255th St) <i>Phase F</i>	Construct second SB lane on SR 169 from SE 244th St to SE 255th St. Provide center left turn lane/pockets where warranted. Provide curb, gutter, bike lane, and sidewalk on the west side.	\$8,480
110	SR 169 Widening (SE 244th St to SE 255th St) <i>Phase G</i>	Construct second NB lane on SR 169 from SE 255th St to SE 244th St. Provide curb, gutter, bike lane, and sidewalk on the east side.	\$5,600
111	SR 169 Widening (SE 271st St to SE 276th St) <i>Phase B</i>	Construct second NB lane SE 271st St to SE 276th St. Provide curb, gutter, bike lane, and sidewalk.	\$590
112	SR 169 Widening (SE 276th St to SE 280th St) <i>Phase H</i>	Construct a second SB lane on SR 169 from SE 276th St to SE 280th St. Provide center left turn lane/pockets where warranted. Provide curb, gutter, bike lane, and sidewalk on the west side.	\$1,970
113	SR 169 Widening (SE 276th St to SE 280th St) <i>Phase I</i>	Construct a second NB lane on SR 169 from SE 276th St to SE 280th St. Provide curb, gutter, bike lane, and sidewalk on the east side.	\$1,930



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114	SR 169 Widening (from SE 280th St to South City Limit) <i>Phase J</i>	Construct second SB lane on SR 169 from SE 280th St to south city limit. This will convert SB approach at SE 280th St intersection to through lane and through/right-turn shared lane. Provide curb, gutter, bike lane, and sidewalk on the west side.	\$3,210
115	SR 169 Intelligent Transportation System Implementation (SE 231st St to SE 280th St)	Upgrade signal controllers, install fiber, and ITS equipment along the SR 169 corridor between SE 231st St and SE 280th St. Equipment includes new controllers and closed circuit video cameras.	\$0 (funded by WSDOT)
SR 516 Improvements (SE Kent-Kangley Road)			
117	SR 516 (207th Ave SE to 216th Ave SE) <i>Phase B</i>	Construct second EB lane on SR 516 from west city limit to 216th Ave SE. Construct second WB lane on SR 516 from 1,000 ft east of 216th Ave SE to west city limit. Include curb, gutter, bike lanes, and sidewalks. Provide center left turn lane/pockets where warranted. Improve 216th Ave SE intersection.	\$4,320
118	SR 516 (218th Ave SE to 228th Ave SE) <i>Phase C</i>	Widen to 3 lanes. Install new curb, gutter, bike lane, and sidewalk on the south side for the entire length and the north side west of Witte Road. Construct center left turn lane/pockets, where warranted. Construct NB right-turn lane. Left-turn signal pockets and signal phasing provided at each approach.	\$4,860
119	SR 516 (228th Ave SE to 236th PI SE) <i>Phase D</i>	Widen to 3 lanes. Install new curb, gutter, bike lane, and sidewalk on both sides. Construct center left-turn lane/pockets, where warranted.	\$3,870
Local Arterial Improvements			
120	Witte Rd SE (SE 254th PI to SE 256th PI)	Construct 3 lane roadway (center median/turn lane) from north of SE 254th PI to the south of SE 256th PI. Close direct access from 220th Ave SE to Witte Rd. Realign SE 256th St for improved intersection angle. Install traffic signal at SE 254th PI/Witte Rd SE, when warranted.	\$1,520
121	Witte Rd/SE 268th St Intersection	Construct center turn/merge lane along with curb, gutter, and sidewalks.	\$480
122	216th Ave SE (SR 516 to South City Limit)	Widen to 3 lanes. Install new curb, gutter, bike lane, and sidewalk on both sides. Construct center left turn lane/pockets where warranted.	\$2,250
123	SE 240th St (Witte Rd to 224th Ave SE)	Widen to 3 lanes through frontage improvements on north side of street. Install new curb, gutter, bike lane and sidewalks. Construct center left turn lane.	\$1,940
124	Witte Rd SE (SR 169 to SE 240th St)	Reconstruct roadways to 3 lanes. Install new curb, gutter, bike lanes, street lights, and sidewalk on the east side. May include retaining wall to the west.	\$2,720
125	SE 276th St (SE 216th St to SR 516)	Reconstruct roadway. Install new curb, gutter, bike lanes, street lights, and sidewalks.	\$9,610



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126	SE 231st St (SR 169 to Witte Rd) <i>Phase A</i>	Reconstruct roadway to 3 lanes (one NB lane, one SB lane, and center median/turn lane) between SR 169/SE 231st St intersection and SE Witte Rd. At SR 169 intersection: construct second WB through lane on east leg; WB approach would have left-turn lane, through lane, and through/right-turn shared lane. Provide curb, gutter, bike lanes, and sidewalks.	\$1,480
New Local Roadway Projects			
127	SE 231st St Connection (Witte Rd to SE 240th St) <i>Phase B</i>	Construct 3 lane roadway (one NB lane, one SB lane, and center median/turn lane) between SE Witte Road and SR 169/SE 240th Street intersection vicinity. Provide curb, gutter, bike lanes, and sidewalks.	\$10,140
128	SE 240th St Extension (Witte Rd to Wax Rd)	Construct 2/3 lane extension of SE 240th St between SE Wax Road and Witte Rd SE. Provide center left turn lane/pocket where left turns are likely. Install signal or roundabout at new SE Wax Rd intersection. Reconfigure Witte Rd SE intersection: On EB approach, add right-turn lane, through-lane, and left-turn lane. Provide left-turn pockets on all approaches. Provide curb, gutter, bike lanes, and sidewalks.	\$10,910
129	SE 264th St Extension (SE 242nd Ave to Summit-Landsburg Rd)	Construct 2 lane roadway with curb, gutter and sidewalks between 242nd Ave SE to SE Summit-Landsburg Rd to promote improved circulation in the Four Corners subarea.	\$2,880
130	SE 271st St Extension (SR 169 to 236th PI SE)	Construct new 3 lane road with curb, gutter, bike lanes, and sidewalks (one EB lane, one WB lane and center turn lane) on the new alignment between SE 271st PI/SR 169 intersection and 236th PI SE/SR 516 intersection. Future development would provide a connection between the Extension and the Summit Place development area. At 236th PI SE/SR 516 intersection, install traffic signal or roundabout and provide turn lanes.	\$6,420
131	240th Ave SE Connection (SE 277th PI to SE 279th St)	Connect 240th Ave SE together to provide a local access connection between SE 276th St and SE 280th St.	\$790
132	228th Ave SE Connection (SE 283rd St to SE 286th St)	Construct 2-lane roadway across the railroad corridor. Railroad crossing will be at-grade with signals. Provide curb, gutter, bike lanes, and sidewalks.	\$2,220
133	SE Kent-Kangley Rd/ 242nd Ave SE	Install traffic signal or roundabout to provide for improved operations and better local circulation.	\$470

1. Costs in \$1,000s of dollars (2011\$).

2. EB=eastbound; WB=westbound; NB=northbound; SB=southbound.

Figure 4.20 - Transportation Improvement Projects



**TRANSPORTATION****Support Analysis****SR 169 Improvements (Maple Valley – Black Diamond Road SE)**

SR 169 is a critical highway for the region and for each local community along the corridor. It is the primary route for Cities such as Maple Valley and Black Diamond. Improvements are needed within the City of Maple Valley to increase capacity, improve safety, enhance peak hour traffic operations, and to upgrade the facilities to urban design standards. The future analysis indicates that SR 169 should be widened to four or five lane cross-sections to accommodate the anticipated land use growth in the City and the surrounding communities. The improvements are consistent with the needs identified in WSDOT's SR 169 Route Development Plan completed in 2007. The widening will be accomplished in phases with separate projects listed along SR 169 in Figure 4.21 and shown in Figure 4.22. Since SR 169 is designated a Highway of Statewide Significance, implementation of the improvements will depend on funding by WSDOT or other outside sources as the City does not have the financial means to implement projects along this important regional highway.

Projects 102 through 104 focus on improving traffic operations at key intersections in the northern section of the City. Traffic volumes at these intersections are sensitive to major new roadway projects in the area, and the specific improvements will be confirmed based on results of a recommended Wilderness Village circulation and feasibility study that will need to be conducted at the outset of any of these new roadway improvements. Intersection improvements at SR 169/SE 260th Street (added traffic signal) are included as Project 108.

Projects 106 through 113 reflect widening only along one side of the highway at a time due to funding and timing constraints. Project 115 is intended to improve traffic signal operations, coordination, and management from SE 231st Street to SE 280th Street. WSDOT is leading and funding the signal and Intelligent Transportation System project. The widening projects would add curb, gutter, and sidewalk.

SR 516 Improvements (SE Kent-Kangley Road)

Anticipated future development in the southern areas of Maple Valley and in the City of Black Diamond will require additional capacity improvements along SR 516 between the west city limits and SR 169 to support forecast travel demand. A total of three projects have been identified Figure 4.20 and are shown in Figure 4.21. Implementation of the improvements will depend on funding by WSDOT or other outside sources as the City does not have the financial means to implement projects along this important regional highway.

West of 218th Avenue SE, SR 516 would be widened to five lanes (Project 117). This includes providing additional lanes to the SR 516/216th Avenue SE intersection. It was assumed that SR 516 would be widened to five lanes through the City of Covington before five lanes are needed in this section of Maple Valley. The City should evaluate interim improvement options along the segment of SR 516 between 216th Avenue SE and 218th Avenue SE to address existing safety and operational issues related to access into and out of the Cherokee Bay neighborhood.

East of 218th Avenue SE, SR 516 would be widened to three lanes (Projects 118 and 119). With additional local circulation roadways within the southern parts of the City, this section of SR 516 operated acceptably at three lanes. However, improvements to intersection of SR 516 and Witte

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Road SE would be needed (See Project 118). The SE 271st Street Extension (Project 130) plays a key role in reducing traffic volumes along SR 516.

Local Arterial Improvements

This category of projects includes capacity, safety, and road standard improvements along other City arterials and streets. A total of seven projects have been identified along City roadways and are listed in Figure 4.21 and shown in Figure 4.22.

Projects 120 and 121 would better manage access between Witte Road SE and side streets. This would improve safety in the area, and improve capacity along Witte Road SE. The addition of traffic signals would likely not be warranted due to lower side street volumes.

Projects 122 and 123 would widen roadways to three lanes reflecting their transition from rural to urban arterials. The widening projects would add curb, gutter, and sidewalk.

Street preservation and rehabilitation projects along Witte Road, Projects 124 and 125, would add curb, gutter, and sidewalk. SE 231st Street would also be upgraded to a three lane roadway between SR 169 and Witte Road as the roadway is extended south to SE 240th Street (Project 126).

New Local Roadway Projects

Seven new arterial roadways were identified to support future development within the City. The SE 231st Street Connection (Project 127) is a new roadway that will serve future commercial development east of SR 169 in the Wilderness Village Subarea. Another project will extend SE 240th Street west from Witte Road to Wax Road. The new SE 240th Street Extension (Project 128) is estimated to reduce delays along SR 169 within Wilderness Village and provide better access for vehicles headed to/from areas west of the City.

In order to improve circulation in the southern part of the City and the SR 169/SR 516 intersection in the Four Corners Subarea, the SE 271st Street Extension (Project 130) is to be built between SR 516 and SR 169. The new roadway, along with extension of SE 264th Street (Project 129) and a new signal or roundabout at SE Kent-Kangley Road/242nd Avenue SE (Project 133), will provide improved operations and better circulation within Four Corners and reduce the need to widen the SR 169/SR 516 intersection beyond the five lane cross-section. The SE 271st Street Extension allows SR 516 to remain at three lanes by providing an internal connection to the Summit Place area. Project 132 will allow City residents south of the railroad corridor to connect to the City of Maple Valley without using (and without contributing to) the congested corridors of SR 169 and 216th Avenue SE. To reduce construction costs, the crossing is anticipated to be at-grade with signals. However, approval of a new at-grade railroad crossing may be difficult.

Local Streets

Improvement to or construction of new local streets are not explicitly defined in the long-range plan and are assumed to be built through developer mitigation requirements or Local Improvement Districts (LIDs) based on community support. Local street system plans may be prepared as part of future neighborhood or subarea studies. For example, increased commercial and residential



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development within the Four Corners and Summit Place subareas will need to be balanced with appropriate circulation roadways to allow alternate access routes and provide acceptable levels of roadway system performance. The actual alignment of the future circulation roadways will be determined based on property boundaries, environmental impacts, and engineering considerations.

Maintenance Program

To maximize the use and efficiency of the existing and future transportation infrastructure, the City of Maple Valley will continue with a comprehensive, systematic maintenance program. The program will evaluate arterials and local roadways for pavement condition, signage, sight distance restrictions (such as vegetation blocking sight lines), and neighborhood traffic impacts. Traffic control devices, including traffic signals, should be monitored and serviced regularly. As needed, the program will also be used to evaluate speed limits based on functional classification, design, and roadway conditions.

The City's Pavement Management System (PMS) provides a consistent and systematic approach for identifying overlay projects each year. The PMS also provides input regarding the need to rebuild existing streets, instead of performing an overlay.

To assure that the existing and future transportation infrastructure is preserved in a cost-effective manner, the City will allocate annual budget resources to maintaining existing infrastructure.

Public Transit and Transportation Demand Management

In order to provide viable transportation alternatives, the City of Maple Valley recognizes the importance of transit and travel demand management programs. In general, these programs build on regional programs with some refinements to reflect the specific needs of the City.

Transit Plan

The Transportation Element has been coordinated with King County Metro Transit's 6-Year Development Plan. Transit service in Maple Valley is focused on the SR 169 corridor and the Park-and-Ride lots north of Wilderness Village and in the Four Corners area. King County Metro Transit regularly reviews its service plans and route structure to address possible improvements or reductions in service.

To support future development activity, the City encourages King County Metro Transit to consider additional routes to provide adequate coverage and increased service frequency, especially on the weekends. Increased service frequency and coverage is desired by the City to make transit use more convenient to meet the growing local travel demands. The Maple Valley Transportation Element provides for the following transit/public transportation services and facilities:

- Regional Transit Routes
King County Metro Transit Routes 143, 168, and 907 should continue to be enhanced to provide regional transit services between Maple Valley, Renton, Kent, and Seattle. Changes to future routes should be consistent with the needs of the Maple Valley community and



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should be based on a collaborative route planning process involving the residents of Maple Valley.

- Park-and-Ride Facilities

To support future City growth and increases in transit ridership, a new park-and-ride facility at or near the intersection of SR 516 and 216th Avenue SE should be investigated. This facility will allow more people to gain access to transit services without having to travel through the most congested locations in the City. The new facilities should be coordinated with additional service improvements along the SR 516 corridor.

- Regional Commuter Rail Service

WSDOT and other partner agencies have completed the Southeast King County Commuter Rail Study which evaluated the feasibility of commuter rail service along the existing BNSF Stampede Pass rail corridor that bisects the southern part of the City. The study resulted in determining that commuter rail service along this rail corridor as not being feasible.

- Carpooling and Vanpooling

King County Metro Transit should continue to offer tools to encourage carpooling and vanpooling by City residents. The City will work with King County Metro Transit to increase awareness that carpooling and vanpooling programs are provided.

- Transit Accessibility

The City will coordinate with King County Metro Transit in the evaluation of accessibility to public transportation to/from future developments. The City's road standards require sidewalks on all streets thereby supporting transit service accessibility.

The City will continue to work with King County Metro Transit to ensure high-quality transit services and facilities are maintained as the City continues to grow.

Transportation Demand Management Program

In addition to potential future increases in transit service, transportation demand management (TDM) programs can support the mobility needs of the community. The TDM programs target travel behavior rather than the transportation infrastructure. These programs should be coordinated with Metro Transit, King County, and PSRC to provide a broader basis for reducing single-occupant vehicles and expanding alternative transportation choices.

Maple Valley is a growing community with increased urban levels of development, especially in the Wilderness Village and Four Corners commercial areas. TDM strategies are typically most effective in denser and larger urban settings. However, TDM program strategies coordinated with regional agencies can provide alternatives for residents and employees within Maple Valley. The Washington Commute Trip Reduction Law (RCW 70.94.521) requires TDM performance targets for firms with over 100 employees. However, the Commute Trip Reduction program does not currently apply to



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Maple Valley because the area lacks large employers. Potential TDM strategies for the City of Maple Valley include the following options:

- Flexible/Alternative Work Schedules
Flexible work schedules allow employees to adjust start/end times to accommodate carpools, vanpools, or transit options. Alternative work schedules may be used to reduce the number of days an employee commutes during peak travel periods. These programs help reduce the need for adding capacity to highways and arterials, and reduce the levels of peak hour congestion.
- Telecommuting
The use of telecommunications technology can allow some employees to work from home. This reduces the need for travel to/from a work site for some week days.
- Site and Street Design
Sidewalks and/or other hard surface pathways that connect a development to adjacent pedestrian and bicycle facilities should be provided. Site designs should provide reasonably direct pedestrian access between arterials or collectors and existing or future transit stops. Transit shelters should be considered along arterial streets where the number of transit riders warrants them.

Non-Motorized Facilities

Bicycle, pedestrian, and equestrian facilities play a vital role in the City's transportation environment. The non-motorized transportation system is comprised of facilities that promote mobility without the aid of motorized vehicles. A well-established system encourages healthy recreational activities, reduces vehicle demand on City roadways, and enhances safety within the community.

The City desires to have sidewalks and bike lanes on arterial roadways, unless special circumstances make it prohibitive. The City has an annual program to enhance non-motorized facilities. Segments of arterials and collectors that do not have sidewalks, bike lanes, or adequate walkways on both sides of the street would be improved as part of the identified improvement projects or through the annual non-motorized facilities program. Greater details on existing and planned pedestrian and bicycle facilities are provided in the *Maple Valley Non-motorized Transportation Plan* (March 2013). As a separate publication, the *Non-Motorized Transportation Plan* was developed to directly address non-motorized elements as part of the Maple Valley Comprehensive Plan and the vision of Maple Valley citizens as expressed in a number of planning and design efforts.

The *Non-Motorized Transportation Plan* is consistent and supportive of a number of other planning efforts, including the City's Transportation Element; Road Standards; the Parks, Recreation, Cultural and Human Services Plan; and efforts by citizen organizations in the broader east King County area to identify regional connections.



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Waterborne, Rail, and Air Transportation

There are no airports in the immediate Maple Valley planning area. Regional, national, and international air travel for Maple Valley is provided via Seattle-Tacoma International Airport, located approximately 15 miles west of Maple Valley. The airport can be accessed via SR 169 or SR 516.

The Burlington Northern Santa Fe (BNSF) railroad tracks bisect the southern residential areas of the City. This railroad line is referred to as the Stampede Pass route and is a mainline used to ship freight to/from the east side of the state and beyond. BNSF reactivated the line in 1996 to address projected growth at the ports. The Stampede Pass tunnel located near the crest of the Cascade Mountain Range is below railroad height standards and double-stacked container cars are prevented from using the line. BNSF train schedules indicate that two trains use the route each day, with additional trains using the tracks intermittently. No rail passenger service is offered along the rail line. One controlled crossing is located at the southern city limits at 216th Avenue SE.

There is no waterborne transportation serving Maple Valley. The Transportation Element does not identify waterborne transportation as a component of the City's transportation system.

FINANCE AND IMPLEMENTATION PROGRAM

The transportation improvement projects must be funded and implemented to meet existing and future travel demands in and around the City of Maple Valley. A summary of project costs and a strategy for funding the projects over the life of the plan are presented. In addition, implementation strategies are discussed, including continuing coordination with WSDOT and other agencies to prioritize and fund improvements along SR 169 and SR 516, two regional state highways serving southeast King County. Other strategies call for monitoring and refining City development regulations, such as the concurrency and traffic impact fee programs to ensure development does not outpace transportation system investments. The implementation plan provides the framework for the City to prioritize and fund the improvements identified in the transportation systems plan.

Financing Program

The GMA requires the Transportation Element of the Comprehensive Plan to include a multi-year financing plan based on the identified needs in the transportation systems plan. The financing plan for the Transportation Element provides a basis for the City's annual Six-Year Transportation Improvement Program (TIP). As required by the GMA, the financing program also includes a discussion of how additional funding will be raised and/or level of service standards will be reassessed to assure that the Transportation Element can adequately support the land use plan. Alternatively, the City may reassess its land use plan.



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The transportation financing program becomes a subset of the City's Capital Facilities Plan (CFP) Element. The GMA requires the CFP Element to include at least a six-year plan that finances capital facilities and identifies the sources of public money for the projects.

Project Cost Summary

Figure 4.20 summarizes the list of capital transportation improvement projects based on the analyses of existing conditions and traffic forecasts. Figure 4.22 summarizes the planning level project cost estimates from Figure 4.20. The project costs assume that right-of-way will be needed for some projects to match the City street design standards.

A total of \$104,850,000(2011 dollars) will be needed to fully fund the capital improvements over the 20 year horizon of the Transportation Element. Of these costs, over \$37.9 million are related to improvements on SR 169 within Maple Valley. SR 169 is a designated Highway of Statewide Significance (HSS). Another \$13 million is associated with improvements along SR 516 in the City, a state Highway of Regional Significance (HRS). Combined, the estimated costs of improvements to these two state highways total \$64 million, representing 55 percent of the total identified capital improvement needs. The remaining \$53.8 million in capital costs are needed for improvements to City arterials and collector roadways. These include improvements along Witte Road, SE 240th Street, and SE 276th Street, as well as construction of new roadways to improve circulation and reduce the use of the state highways for local traffic.

Improvement Category	Costs ¹
State Highway Improvements – SR 169	\$37,970,000
State Highway Improvements – SR 516	\$13,050,000
City Arterial Improvements – Existing Facilities	\$20,000,000
City Arterial Improvements – New Roadway Connections	\$33,830,000
Total Project Costs	\$104,850,000

1. Planning level costs in 2011 dollars.

Figure 4.22 - Capital Project Cost Summary

Funding Strategy

The City of Maple Valley utilizes a number of fees and tax revenues to construct and maintain their transportation facilities. Funding sources include local tax revenues, grants, partnerships with other agencies, and developer mitigation. Primary City revenues directed toward transportation capital improvement projects include the Real Estate Excise Tax (REET) and Surface Water Management (SWM) funds. The City also uses fuel taxes and can direct revenues from its General Fund to transportation capital projects, as needed, to balance its Six-Year Transportation Improvement Program (TIP). Developer mitigation could be in the form of traffic impact fees, SEPA mitigation, or construction of frontage improvements. Developer mitigation associated with the new master planned communities in Black Diamond also has been incorporated, consistent with the negotiated mitigation agreement between Maple Valley and Black Diamond. Other agencies such as WSDOT will share in the cost of state highway improvements to meet regional transportation needs.



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The City identified the most appropriate potential funding sources for each of the improvement projects. For example, grants or other agency funding was generally assumed to be a greater share of the revenues for funding improvements on SR 169 or SR 516 than on the local arterial improvements. While, it is unlikely that implementation of the Transportation Element projects will actually match the City's funding assumptions at a project-by-project level, this process does provide for a reasonable estimate of anticipated revenues needed for the overall capital improvement program. It also establishes a level of funding needed through traffic impact fees and other developer mitigation. Figure 4.23 summarizes the anticipated sources of revenues needed to fund the identified capital improvements.

Funding Element	2011 to 2030 Revenues (2011 \$)
<u>City Funding</u>	
Real Estate Excise Tax (REET)	\$14,131,135
Surface Water Management Fund (SWM)	\$2,978,045
	<i>Subtotal</i> \$17,109,180
<u>Grants and Other Agency Funding</u>	
Federal, State, or Other Grants/ Funding Partnership	\$34,359,000
Black Diamond Developer Mitigation ³	\$17,648,100
	<i>Subtotal</i> \$52,007,100
<u>Maple Valley Development Funding</u>	
Traffic Impact Fees – Future Projects ¹	\$35,684,720
Traffic Impact Fees – Prior Impact Fee Costs ²	\$5,800,000
Other Developer Mitigation – Maple Valley ³	\$10,420,000
	<i>Subtotal</i> \$51,904,720
<i>Estimated Revenues without Prior Traffic Impact Fee Costs</i>	<i>\$115,221,000</i>
Total Estimated Revenues	\$121,021,000

1. Traffic impact fee revenues based on \$35,684,720 of costs of capital improvements shown in Figure 4.21.
2. Impact fee program would also include \$4,800,000 associated with prior impact fee costs associated with the roundabout at Witte Road and SE 248th Street and \$1,000,000 for debt service for capital improvements for the Four Corners roadway improvement projects.
3. Maple Valley developer funding beyond traffic impact fees. Could include frontage improvements, local improvement districts, business improvement district, or other similar funding program. Assume that all, or part of, improvements are constructed or right-of-way dedicated as a condition of development.
4. Accounts for estimated revenues associated with mitigation of the master planned developments in Black Diamond pursuant to the mitigation agreement.

Figure 4.23 - Financing Strategy Summary

City Revenues

The City of Maple Valley has directed revenues from its Real Estate Excise Taxes (REET) to fund transportation improvement projects. The program identifies funding from REET at an average of over \$700,000 per year. The City also allocates some revenues from its Surface Water Management (SWM) program to help fund transportation projects. Drainage and retention of storm water is part of most roadway and intersection expansion projects making SWM revenue an appropriate part of the transportation funding program. Given the uncertainty of the REET and SWM funding on a year-to-year basis, the City plans to fill gaps in City revenues from its fuel taxes and general fund, as available. These other City funding sources are typically directed toward preservation and operations of the transportation system, but could be redirected to capital funding for a particular need, with the opportunity to be "reimbursed" through additional grants or future impact fee payments.



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Grants and Other Agency Funding

The funding program identifies over \$34 million in funding from grants or contributions by other agencies. This represents nearly 30 percent of the estimated capital transportation improvement program costs. The majority of the identified grant and other agency funding are associated with improvements to SR 169 and SR 516. These state highways serve a significant level of through traffic, therefore implementation of the projects will depend on funding by WSDOT or other outside funding sources as the City does not have the financial means to implement projects along these important regional highways. The travel forecasting process identified that 40 to 60 percent of the growth in traffic on the state highway was attributable to growth outside of Maple Valley. WSDOT and PSRC have established level of service standards for these facilities which will require funding through federal, state, and regional sources. In addition, partnerships with Black Diamond, Covington, King County, and transit providers can be part of the funding program for these state highways. Grant revenue also has been identified to help fund local arterial improvements identified in the Transportation Element. New roadway connections such as the proposed SE 231st Street and the extension of SE 240th Street will help reduce local traffic use of SR 169 and will support economic development within the City. The projects to upgrade SE 276th Street, 216th Avenue SE and Witte Road SE are also good candidates for grants as the City continues to transition from the County road standards designed for lower levels of traffic to more urban road standards to serve higher densities and provide for needed pedestrian and bicycle facilities.

Black Diamond Development Mitigation

Maple Valley and Yarrow Bay Holdings, the applicant for the two master planned communities in Black Diamond, have entered into a mitigation agreement to help fund transportation improvements in Maple Valley to address impacts identified in their environmental impact statements. Based on the percentage contributions toward specific projects, the City of Maple Valley funding analyses estimates this contribution at approximately \$17.65 million (2011 dollars). This estimate assumes significant levels of grant funding will be secured for these projects, prior to estimating the cost share for mitigation. If grant or other agency funding is not secured, then mitigation from the Black Diamond developments may increase.

Traffic Impact Fees

The GMA allows agencies to develop and implement a transportation impact fee (TIF) program to help fund some of the costs of transportation facilities needed to accommodate growth. State law (Chapter 82.02 RCW) requires that TIFs are:

- Related to improvements to serve new developments and not existing deficiencies.
- Assess proportional to the impacts of new developments.
- Allocated for improvements that reasonably benefit new development.
- Spent on facilities identified in the CFP.

TIFs can only be used to help fund improvements that are needed to serve new growth. The projects can include recently completed projects to the extent that they serve future growth and did not

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solely resolve existing deficiencies. The cost of projects needed to resolve existing deficiencies cannot be included.

The City implemented and adopted a traffic impact fee program in 1999. The program is defined in Chapter 16.60 of the Maple Valley Municipal Code. The original impact fee program was based on the City's Six-Year Transportation Improvement Program (TIP). This resulted in significant year-to-year changes in the impact fee, depending on what projects (and costs) were included in each year's TIP. For example, the cost per new PM peak hour trip in 2003-2006 was in the range of \$3,500 to \$4,000. During the 2007-2009 time periods, the City's traffic impact fee rate increased significantly, reaching a high of almost \$6,300 per new PM peak hour trip in 2008. During 2010, the City's impact fee rate dropped to \$2,859 which resulted from a significant decrease in projects included in the TIP due to the poor economy and reduction in other funding needed to implement the transportation projects. In 2008, the Washington State Auditor's office conducted a performance audit of different impact fee programs, including the City of Maple Valley. The Auditor's report recommended agencies use a longer-term project list for developing traffic impact fee programs in order to reduce these large fluctuations in fee rates.

The funding strategy assumes that the City will revise its traffic impact fee program based on the 20-year list of improvement projects, as identified in Figure 4.20. This process will reduce the annual fluctuations in impact fee rates and should bring more consistency to the revenue assumptions during the planning horizon. The use of a longer-term project list also will reduce the need for an annual update of the impact fee calculation. The City can apply a cost escalation factor each year, or update project cost estimates, to update the rates. A full evaluation and update of the impact fee rates would primarily be needed only when the Transportation Element is updated to reflect changes in land use plans, funding, level of service standards, or regional impacts.

The funding program for the Transportation Element identified which projects, and costs, were eligible to be included in the impact fee program. This resulted in approximately \$35.7 million in impact fee project costs. In addition, the City included costs for the recent roundabout at Witte Road at SE 248th Street (\$4.8 million) and debt service for growth-related transportation improvements in the Four Corners subarea (\$1 million). Based on these projects, and assumed grant and other agency funding, the traffic impact fees are estimated to account for almost \$41.5 million (2011 dollars) in revenues. This represents approximately one-third of the total funding program, including the contributions toward prior transportation projects and related debt service. The impact fee costs are divided by the increase of 10,388 growth trips estimated using the City's travel demand model. This results in a cost per new PM peak hour trip of approximately \$3,900, which is consistent with the City rates in effect during 2003 and 2006, but lower than the fees between years 2007 to 2009.

Other Developer Mitigation

The Transportation Element identifies \$10.4 million in other developer mitigation as part of the funding program. New developments can be required to dedicate right-of-way and/or construct at least part of some of the improvements listed in Figure 4.20. Developer mitigation could include frontage improvements and other identified improvements to mitigate capacity or safety deficiencies caused by the development. As part of the funding program, developer mitigation (beyond the



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identified traffic impact fees) is primarily assumed for improvements associated with new roadway corridors, including SE 231st Street, SE 271st Street, or upgrades to existing roadways such as SE 240th Street. The City may, however require developer mitigation at other locations identified in the Transportation Element or at other locations, as determined during the development application and review process. Other strategies for funding these new or upgraded City roadway corridors include the formation of one or more Local Improvement Districts (LID) or Business Improvement Districts (BID). Formation of LIDs or BIDs can help assure completion of the full corridor improvement in a timely manner, instead of a more piecemeal process as each development application is reviewed and approved.

Reassessment Strategy

The funding strategy is based on grants and other outside funding that the City does not control. As noted above, the City may be able to shift revenues from other funding programs to address specific needs as yearly budgets are prepared. In addition, the City is committed to reassessing their transportation needs and funding sources each year as part of their annual Six-Year Transportation Improvement Program (TIP). This allows the City to match the financing program with the shorter-term improvement projects and funding. The plan also includes goals and policies to periodically review land use growth, adopted level of service standards, and funding sources to ensure they support one another and meet concurrency requirements.

In order to maintain the vitality of the City's transportation system, the City should adhere to the following principles in its funding program:

- As part of the development of the annual Six-Year Transportation Improvement Program, the City will balance improvement costs with available revenues.
- Review project design during the development review process to determine whether costs could be reduced through reasonable changes in scope or deviations from design standards.
- Coordinate and partner with WSDOT and other agencies to vigorously pursue grants from state, federal, and regional agencies to help fund and implement improvements along SR 169 and SR 516.
- Work with regional and local agencies to develop multi-agency grant applications for projects that serve regional travel.
- Review traffic impact fee revenues each year to determine whether the impact fees should be adjusted to account for project cost increases and/or decreases in grants or WSDOT cost sharing.
- If the actions above are not sufficient, consider changes in the level of service standards and/or limit the rate of growth.

Implementation Program

Implementation of the Transportation Element involves several strategies. These include coordination with developers and partnering with other agencies to construct the transportation



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improvement projects and expand transit service to the City. Partnering with other agencies and use of grants will be especially critical in the implementation of safety, capacity, and operational improvements along SR 169 and SR 516. This may include re-prioritizing roadway projects as new funding sources become available or by focusing on areas most impacted by new development. The City will also continue to review strategies to phase improvements to allow funding to be spread over a longer time period. In addition, the City will need to review, maintain, and possibly update its Concurrency Management Program, Traffic Impact Fee, and other development review processes to assure that the impacts of growth are mitigated and transportation improvements are completed concurrent with new development.

Partnering with Other Agencies

The City of Maple Valley is designated as a larger city in PSRC's Vision 2040 plan. The Vision 2040 plan notes that these larger cities will play an important role in accommodating growth in the region. In particular, these cities will continue to become important subregional job, service, cultural, and housing centers. The Transportation Element supports the City's role through its policies to support and expand use of transit, transportation demand management, and non-motorized travel to reduce the number of vehicle trips generated by development in the City. The City will need to coordinate with King County Metro and other nearby cities to implement facilities and services to meet those objectives. These will also help assure consistency in plans and implementation programs between agencies to meet the goals of the regional plan.

The City will partner with WSDOT to implement improvements along both SR 169 and SR 516 consistent with the Transportation Element project list. Projects along both state highways serve regional travel patterns as well as provide local access within Maple Valley. Without WSDOT as a partner, the City is unable to put a high priority on major capacity improvements along both state highways since the improvements serve significant levels of regional traffic and the projects cost more than the City can reasonably fund on their own. These projects should be considered for joint submittal of grants, with the local match being combined from benefiting agencies. Partnering with WSDOT will be critical in the implementation of the Transportation Element project list.

The City has entered into an agreement with Yarrow Bay Holdings, the applicant for two master planned communities in Black Diamond, related to mitigation of traffic impacts in Maple Valley. The City of Black Diamond has incorporated the mitigation into the conditions of approval for the Lawson Hills and The Villages developments. Maple Valley will need to monitor the growth and impacts of these developments. The City can combine the mitigation funding with City funding in its pursuit of grants and/or partnerships with other agencies to implement key improvements along SR 169 and SR 516.

Other agency partnering opportunities involve King County Metro Transit and the Tahoma School District. Coordination with both agencies could lead to cost sharing of improvements to construct pedestrian facilities around schools or transit routes.



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Project Priorities and Timing

The City of Maple Valley will use the annual update of the Six-Year TIP to re-evaluate priorities and timing of projects. Throughout the planning period, projects will be completed and priorities will be revised. The development of the TIP also will be used to identify potential phasing options to fit within available revenues during that six-year time horizon. The City will monitor traffic volumes and the location and intensity of land use growth in the City. The City will also need to monitor traffic growth from Black Diamond and other adjacent communities. Based on this information, the City will then be able to direct funding to areas that are most impacted by growth or may fall below the City's level of service standard. The development of the TIP will be an ongoing process over the life of the plan and will be reviewed and amended annually.

Concurrency Management and Development Review

Concurrency refers to the ongoing process of coordinating infrastructure needs with community development. This concept was formalized in the GMA to ensure that adequate public facilities are provided in concert with population and employment growth. For transportation facilities, the GMA requirement is fulfilled if its level of service standards will continue to be met including the additional travel demand generated by each development.

Concurrency determinations for the roadway network are closely linked with development review decisions. In addition, the City reviews development applications pursuant to the State Environmental Policy Act (SEPA). Concurrency and SEPA are primarily focused on a shorter-term time frame. The City requires payment of traffic impact fees to help fund growth related improvements, both long-term and short-term needs. Projects that resulted in an adverse traffic impacts are required to fund or implement mitigation measures that reduce the impact below a level of significance and/or meet the level of service standard. The City provides credits where developers are required to construct improvements whose costs are included in the traffic impact fee program.

The City will need to regularly monitor the operations and levels of service for the identified concurrency intersections. This will include an assessment of existing operations for North and South Concurrency Intersections. The monitoring also will evaluate forecast conditions to estimate the number of new PM peak hour trips that can be accommodated before the level of service standard for the North and/or South Concurrency Intersections would not be met. This will be used by the City in evaluating concurrency for proposed development. The City will use this information in developing its Six-Year Transportation Improvement Program, pursuit of grants, and coordination with WSDOT and other agencies.

The North Concurrency Intersections currently operate at a weighted average LOS D and the South Concurrency Intersections operate at LOS D based on 2014 traffic count data. These meet the City's LOS standard. Based on the 2030 baseline forecasts, the North Concurrency Intersections would operate at LOS F and the South Concurrency Intersections would operate at LOS E if no further improvements are made. Using a straight-line estimate of growth, the North Concurrency Intersections are estimated to fall below the LOS D standard by 2018. The South Concurrency



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Intersections would likely drop below their LOS D standard by 2027. Therefore, the City will need to pursue improvements in the north part of SR 169 within the next several years in order to maintain concurrency. With the improvements identified in the Transportation Element both the North and South concurrency Intersections are forecast to operate at a weighted average LOS D.

As each development application is reviewed, the City will determine if there are an adequate number of trips available at the concurrency intersections. If the number of trips available for the concurrency intersections is not sufficient then the City will establish conditions of approval. Since SR 169 is a Highway of Statewide Significance, the City cannot use concurrency to deny the development application; therefore, conditions of approval will be established through SEPA and in coordination with WSDOT (as applicable) in order to mitigate the impacts of the development.

The City will also monitor traffic operations and safety at other intersections throughout the City. The City will apply SEPA and the City's Road Standards to evaluate and identify appropriate improvements for mitigating impacts of developments in the City. The City also will conduct its own studies and work with other agencies to define needed improvements to be incorporated into its Six-Year Transportation Improvement Program, which is updated annually.

If expected funding for improvements to meet future transportation needs is found to be inadequate and the City will not be able to meet their adopted level of service standards, then the City will need to pursue options as laid out under the Reassessment Strategy, presented previously.

CONSISTENCY WITH OTHER AGENCIES

Maple Valley's transportation system is part of, and connected to, a broader regional highway and arterial system. The GMA works to increase coordination and compatibility between the various agencies that have responsibilities for the overall transportation system. Since transportation improvements need to be coordinated across jurisdictional boundaries, the Transportation Element needs to be consistent with and supportive of the objectives identified in the Washington State Transportation Plan, PSRC's Vision and Transportation 2040, and the transportation plans or capital improvement plans of the surrounding agencies. Developing the Transportation Element is primarily a bottoms-up approach to planning, with the City exploring its needs based on the land use plan. Eventually, the local projects are incorporated into regional and state plans. A schematic of this approach is shown below.

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The Maple Valley Transportation Element took into account planned improvements, priorities, and policies of the WSDOT, PSRC, King County, City of Covington, and the City of Black Diamond. The following summarizes how the Maple Valley Transportation Element relates and is consistent to these other state, regional, and neighboring agency plans.

WSDOT

The Washington Transportation Plan (WTP) recently updated in 2015 and the associated 2007-2026 Highway System Plan (HSP) from December 2007, provide the umbrella for all metropolitan and regional transportation plans. The updated WTP focuses on key policies and strategies for the State, while the HSP still maintains the most recent long-term statewide project list.

The Highway System Plan is an element of the WTP. The HSP identifies highway system improvement projects and programs consistent with the WTP priorities. The HSP is constrained by available funding forecast for the next 20 years. Policies and improvement projects listed in the WTP and HSP were reviewed for consistency with the strategies and projects recommended in the Transportation Element.

As required by the GMA, the Maple Valley Transportation Element addresses the existing and future conditions of SR 169 and SR 516 serving the City. The transportation inventory describes existing traffic volumes, levels of service, and safety along both highways. The Transportation Element also identifies forecast conditions and improvement needs to resolve capacity, operations, safety, and multimodal transportation needs along both corridors. SR 169 is classified as a State Highway of Statewide Significance (HSS). According to the HSP, the LOS standards are set forth by State law. State law sets LOS D for HSS facilities in urban areas. Since the City is a designated urban area, the LOS D standard applies for the segment of SR 169 within the City. GMA concurrency requirements do not apply to HSS facilities. While the City will monitor several SR 169 intersections as part of its concurrency program, any conditions of development approval will be established through SEPA and projects would not be denied based on concurrency, thereby maintaining consistency with the state statutes and regional plans.



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SR 516 is classified as a Tier 2 State Highway of Regional Significance (HRS). PSRC and the local agencies have adopted an LOS D standard for SR 516 within Maple Valley. Concurrency will be applied along this corridor based on the program summarized previously in the Transportation Element. The City's LOS D standard for arterials and collectors is consistent with state and regional LOS standards for both SR 169 and SR 516.

The City has worked with WSDOT to coordinate and implement roadway and intersection improvements along SR 169 and SR 516. The WSDOT HSP calls for widening SR 169 to four lanes through the City from SE 231st Street to Kent-Kangley Road SE. The widening along SR 169 is also reconfirmed in the WSDOT SR 169 Route Development Plan (RDP) completed in 2007. However, the RDP shows the widening of SR 169 extending to SE 291st Street, which is the southern city limits. Maple Valley's Transportation Element identified the need for widening SR 169 to four or five lanes ending at SE 280th Street, with only one additional southbound through lane extending to the southern city limits. The City's improvement projects for SR 169 are generally consistent with the WSDOT SR 169 RDP, which was completed after the update of the HSP.

The Transportation Element identifies widening SR 516 to five lanes from the City limits to 216th Avenue SE, with three lanes continuing to the future SE 271st Street Extension. The Highway System Plan does not identify any improvements to SR 516 in the next twenty years. A recent WSDOT SR 516 Corridor Study (January 2013) looked at the corridor between SR 167 in Kent and SR 169 in Maple Valley. This study identified long-term capacity improvements to the corridor at many locations west of Maple Valley including between 192nd Avenue SE to 216th Avenue SE. However, the Corridor Study did not look at a scenario that considered changes in travel demands once the capacity bottleneck in Covington was removed (widened), and therefore the Corridor Study recommended no changes east of 216th Avenue NE. Based on the analysis conducted for this Transportation Element, it is expected that the capacity bottleneck would shift east and require additional capacity and urban improvements to SR 516 east of 216th Avenue NE as discussed in this Transportation Element.

None of the widening projects along either SR 169 or SR 516 are currently funded by WSDOT, but the City is including a portion of the costs as part of its traffic impact fee program. The City will continue to work with the WSDOT to aggressively pursue grants or other funding to implement the state highway improvements along these critical corridors as identified in the Transportation Element.

PSRC

The Puget Sound Regional Council (PSRC) adopted VISION 2040 and Transportation 2040 to guide transportation policies, priorities and investments for the four county region. The update of the Maple Valley Transportation Element included a review of the policies and projects that were important to consider and build from to provide regional and local consistency. The appropriate policy and project updates were incorporated into the City's Transportation Element so that it is consistent and supportive of both VISION and Transportation 2040 (the Region's Metropolitan Transportation Plan). Several policies were added to the City's Transportation Element to address important regional priorities such as multimodal connectivity, complete streets, green streets, low

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impact design, sustainability, electric vehicles, alternative fuel, environmental impacts, air quality, and travel demand management.

The PSRC travel demand model was used as the basis in constructing the Maple Valley travel demand model. The travel forecasts for areas outside the City's immediate study area were directly integrated from the PSRC model. Therefore, the travel forecasts and subsequent operations and safety analysis for the City considered and incorporated regional growth, consistent with PSRC land use and travel forecasts.

Transportation 2040 identifies widening along SR 169 to four lanes through the City from SE 231st Street to Kent-Kangley Road SE (SR 516) with WSDOT as the lead sponsor. In addition, Transportation 2040 also shows the widening of SR 169 to five lanes extending between SE 270th Street and SE 291st Street, which is the southern city limits. The City's Transportation Element identifies widening of SR 169 to four or five lanes south to SE 280th Street, with only one additional southbound through lane extending to SE 291st Street. Since PSRC identified the City of Maple Valley as the sponsoring agency of that project, the next update of the regional plan should incorporate the updated extents of the widening along SR 169 and show five lanes is only necessary to SE 280th Street. Otherwise, the City's improvement projects for SR 169 are generally consistent with Transportation 2040.

Transportation 2040 also includes widening the SR 516 corridor to five lanes from the western City limits to SR 169, but does not show any additional widening to the west of the City within the City of Covington. The Transportation Element identifies the need to widen SR 516 to five lanes from the western city limits to 216th Avenue SE, but only if widening is completed in the City of Covington to the west. If the five lane cross section is not extended to the east from Jenkins Creek (180th Avenue SE), then widening beyond three lanes within the City of Maple Valley would not be necessary. As discussed above, a recent WSDOT SR 516 Corridor Study (January 2013) was completed that identified long-term capacity improvements to the corridor between 192nd Avenue SE to 216th Avenue SE, which is consistent with the City's Transportation Element. However, the corridor study failed to identify volume demand changes to the corridor east of 216th Avenue once this widening occurred, and did not identify any capacity improvements for the eastern section of the corridor. Based on the analysis conducted for this Transportation Element, it is expected that capacity improvements would be needed east of 216th Avenue SE along SR 516.

The City roadway functional classification system is slightly different from the federal functional classification system, particularly for roadways such as Witte Road, SR 516, and many of the collector streets. The City will work with PSRC to prepare and submit an application to update the federal functional classification map so that it is consistent with the City street classifications. The changes should be focused on key corridors such as Witte Road, SR 516, SE 240th Street, 228th Avenue SE, SE 231st Street and SE 280th Street.

King County

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King County transportation and capital improvement plans were reviewed as part of the Maple Valley Transportation Element update. County road classifications were also reviewed and determined to be compatible. The City's functional classification map notes the classification of County roadways. Roadway construction projects were obtained from King County's Transportation Needs Report 2012 (TNR). No major capital improvements are identified within the unincorporated areas of King County that would impact or influence specific outcomes of the Maple Valley Transportation Element. Additionally, King County's existing and future land use data for unincorporated areas within the study area were included into the Maple Valley travel demand model. The Transportation Element is consistent with and accounts for travel forecasts from the unincorporated areas of King County.

King County Metro Transit

King County Metro Transit provides transit service for Maple Valley. The Maple Valley Transportation Element acknowledges the need for coordination between the City and King County Metro to work together to identify service improvements and strategies to serve Maple Valley. The City has also developed policies and road standards to provide adequate streets and non-motorized facilities to support transit service. King County Metro's six-year development plan was reviewed as part of the Maple Valley Transportation Element update. No significant service changes or new transit facilities are currently planned for the City of Maple Valley. However, the Maple Valley Transportation Element identifies desired service enhancements to help reduce travel demands and support the higher densities identified in the Land Use Element, as set forth in the PSRC plans.

City of Covington

The City of Covington is located to the west of Maple Valley. The primary transportation interface is along the SR 516 and Wax Road corridors. The Maple Valley Transportation Element identifies the need to widen SR 516 to five lanes from the western city limits to 216th Avenue SE, but only if widening is completed in the City of Covington to the west. Covington's Six-year Transportation Improvement Plan (2015-2020) identifies two projects to widen SR 516 to five lanes from Jenkins Creek to 192nd Avenue SE. This still leaves approximately one mile of roadway between 192nd Avenue SE and the western Maple Valley city limits to be widened. Covington's existing Transportation Element (2009) does not identify any additional widening of SR 516 east of 192nd Avenue SE during the next twenty years. Any future implementation of improvements along SR 516 would need to be closely coordinated between both cities.

The Maple Valley travel demand model incorporates Covington's existing and future land use projections. In addition, the model transportation analysis zones (TAZs) are consistent with the zones in Covington's travel demand model in order to easily integrate and evaluate future changes in land use within the study area.

City of Black Diamond



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Support Analysis

The transportation systems for the Cities of Maple Valley and Black Diamond connect along the southern boundary of Maple Valley. SR 169 and 216th Avenue SE connect to the City of Black Diamond and its UGA. The Maple Valley travel demand model incorporates Black Diamond's future employment and residential projections. The land use growth expected to occur in the City of Black Diamond was an important consideration in developing the travel forecasts and identified capital projects that are highlighted in the Maple Valley Transportation Element. The land use growth assumed for Black Diamond is consistent with the major development plans for Lawson Hills and The Villages, two master planned communities that have been approved. As part of the approval process, Maple Valley entered into an agreement with the applicant for two master planned communities to provide funding for needed regional improvements. This mitigation revenue has been estimated in the Transportation Element funding strategy.

The Transportation Element identifies two projects that border the City of Black Diamond and its UGA. They include widening of SR 169 to three lanes to the southern city limits of Maple Valley, and widening and reconstructing SE 216th Avenue SE to three lanes to support the increase in traffic volumes and non-motorized activity between Black Diamond and Maple Valley. Land use growth in Black Diamond also depends on other capacity improvements in the City of Maple Valley such as widening of both SR 516 and SR 169. The City of Maple Valley will monitor the growth and impacts of development in Black Diamond and pursue grants and/or partnerships with other agencies, along with the mitigation payments, to help implement the regional improvements along SR 169 and SR 516.



TRANSPORTATION

Goals & Policies

INTRODUCTION

The Transportation Element provides the link between the Land Use Element and the transportation facilities and services needed to support growth during the next twenty years. This is accomplished by identifying capacity, operational, and safety improvements along City roadways and also by addressing multimodal needs such as transit, pedestrian, and bicycle facilities. The Transportation Element reflects the interdependence of transportation and land use and is influenced by choices made as part of the Land Use Element. Conversely, land uses are similarly influenced by choices and policies made in the Transportation Element.

The Transportation Element is a key component of the City's Comprehensive Plan and works hand-in-hand with other Comprehensive Plan elements. This section identifies the City of Maple Valley's goals and policies for transportation as well as the City's future transportation system and facilities, level-of-service (LOS) standards, and concurrency monitoring system. Future land uses proposed as part of the Land Use Element are used to develop transportation strategies and to identify necessary transportation facilities (roadways, sidewalks, trails, bike lanes, etc.). Similarly, the Capital Facilities Element and the City's ongoing Transportation Improvement Program (TIP) present more-specific facility recommendations based on the Transportation Element.

GOALS & POLICIES

Goal T-1: To provide for a safe, efficient, integrated, and sustainable multimodal transportation system consistent with regional transportation objectives that support the City's Comprehensive Plan Vision and the Land Use Element.

REGIONAL TRANSPORTATION FRAMEWORK

- Policies:**
- T-P1** Support the development of a balanced regional transportation system and work with federal, state, regional and local agencies to develop the City's transportation system, financing strategy, and land use plan that helps achieve regional mobility goals.
 - T-P2** Coordinate with the Puget Sound Regional Council (PSRC), state, and other regional and local agencies to plan, implement, and operate a highly efficient, sustainable, multimodal transportation system that supports the *Regional Growth Strategy* as outlined in VISION 2040.
 - T-P3** Coordinate infrastructure planning and financing with other agencies to ensure that these plans are consistent with the regional mobility goals and land use plans.
 - T-P4** Develop and implement non-motorized transportation systems, such as bicycle and pedestrian facilities and connections, which are consistent with regional non-motorized plans as well as coordinate with adjacent jurisdictions and King County Parks Department to ensure the interconnectedness of the local trail system.
 - T-P5** Coordinate with federal, state, regional, and other local agencies to



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- protect the operation of the transportation system in time of emergency, disaster, or security response.
- T-P6** Coordinate with federal, state and regional agencies to secure the funding necessary to improve SR 169 and SR 516 to urban standards in accordance with adopted plans.

LOCAL TRANSPORTATION SYSTEM

- T-P7** Develop the City's transportation system to serve existing and future land uses and promote economic growth.
- T-P8** Provide for the needs of drivers, public transportation vehicles and patrons, bicyclists, and pedestrians of all ages and abilities in the planning, programming, design, construction, reconstruction, retrofit, operations, and maintenance of the City's transportation system.
- T-P9** Implement transportation improvement projects and programs to develop a safe and efficient multimodal transportation system, while minimizing the negative impacts to low-income, minority, and special needs populations.
- T-P10** Promote the mobility of goods and people and seek to ensure multimodal transportation options which are consistent with the City's Vision.
- T-P11** Promote connectivity by creating multiple access points and definitive circulation systems.
- T-P12** Involve the public in identifying transportation system needs and the planning, design, and implementation of transportation facilities, programs, and services.
- T-P13** Adopt a six-year Transportation Improvement Program (TIP) to support implementation of City transportation improvement projects and programming of revenues.
- T-P14** Preserve and acquire rights-of-way to implement the Transportation Element.
- T-P15** Apply a street functional classification system which identifies a street hierarchy and is consistent with the City's roadway design standards.
- T-P16** Design, operate, and regulate access along arterials to improve safety and operations, accommodate and facilitate through traffic, and connect with regional facilities. Where appropriate, work with the Washington State Department of Transportation (WSDOT) to accomplish these actions.
- T-P17** Work with WSDOT and adjacent jurisdictions to discourage diversion of traffic from arterials onto local streets.
- T-P18** Consider use of traffic calming measures to discourage cut-through traffic in residential areas, while maintaining an interconnected street system for access and circulation.
- T-P19** Encourage and promote the inter-connection of streets and non-motorized connections. Where cul-de-sacs are allowed, provide for non-motorized connections, where practical.



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- T-P20** Accommodate reasonable emergency vehicle access on public streets.
- T-P21** Protect the investment in the existing and future street system and associated facilities (e.g., sidewalks, transit stops, landscaping) through an ongoing street maintenance and preservation program.
- T-P22** Work with local utility providers to ensure that future roadway improvements are coordinated and timed to occur concurrently with utility improvement needs to the maximum extent possible.
- T-P23** Work with developers to ensure that roads are built to City standards through a combination of right of way dedication, frontage improvements, funding through mitigation fees, and traffic impact fees.
- T-P24** Land dedication and roadway improvements associated with projects listed on the City's long range Capital Improvement Program that are completed by private development may be eligible for a credit to be applied towards traffic impact fees owed for the same development.

LEVEL OF SERVICE AND CONCURRENCY REVIEW

- T-P25** Establish LOS D or better for concurrency review based on a weighted average delay of key intersections during the weekday PM peak hour. The average delay at each intersection would be calculated using the *Highway Capacity Manual, 2010* methodologies. The weighted average is based on the sum of total delays at the group of concurrency intersections divided by the sum of the total entering volumes for the same intersections. The following intersections will be evaluated under concurrency:
 - North Maple Valley (4 intersections)
SR 169 @ 231st Street; @ Wax Road; @ Witte Road; @ 240th Street.
 - South Maple Valley (3 intersections)
SR 516 @ SR 169; @ Witte Road; @ 216th Avenue.
- T-P26** Establish the following level of service standards for other intersections in the City using the *Highway Capacity Manual, 2010* methodologies:
 - Signalized, Roundabout, and All-way Stop Controlled Intersections
The LOS standard for all non-concurrency signalized, roundabout, and all-way stop controlled intersections within the City limits shall be LOS D. The LOS standard will be evaluated based on the average performance of all approaches.
 - Two-way, Stop Controlled, Unsignalized Intersections
The LOS standard for all two-way, stop controlled, unsignalized intersections within the City limits shall be LOS D and be applied to each approach or separate traffic movement at an intersection. For intersections on SR 169, Kent-Kangley Road and Witte Road



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the LOS standard shall be LOS D for the major arterial legs and LOS E for each access leg. On a case-by-case basis the City may allow the level of service for traffic movements from the minor street at a two-way, stop controlled intersection to operate below the adopted standard if the Public Works Director (or designee) determines that no significant safety or operational impact will result. As appropriate, mitigation will be identified and required to address potential impacts to safety or operations. Potential installation of traffic signals or other traffic control devices at these locations shall be based on the *Manual on Uniform Traffic Control Devices*, the Transportation Element, and sound engineering practices.

- T-P27** Adopt and implement development regulations and a transportation concurrency management program based on the adopted level of service standards.
- T-P28** Monitor the operation of the transportation system to determine whether the level of service standards and concurrency requirements are being met. If concurrency cannot be demonstrated, the City shall reassess the Land Use and Transportation Elements and make modifications to ensure that concurrency requirements can be reasonably met.

NON-MOTORIZED TRANSPORTATION

- T-P29** Implement non-motorized transportation facilities and services consistent with policies and strategies in the Non-Motorized Plan; Comprehensive Plan; Road Standards; Design Review Guidelines; Development Standards; and Parks, Recreation, Cultural and Human Services Plan.
- T-P30** Apply applicable WSDOT design standards in constructing new facilities and retrofitting existing City transportation facilities that address the needs of pedestrians and bicyclists along state highways.
- T-P31** Employ Design Guidelines for Off-Street Facilities included in the Non-Motorized Transportation Plan and geometric design guidelines from the Maple Valley Parks, Recreation, Cultural and Human Services Plan for walking and bicycling facilities that are not part of the general purpose roadway system.
- T-P32** Develop a map of Maple Valley's bicycle routes and trail system and make it available on the City web page and at the Maple Valley Chamber of Commerce and other information outlets.
- T-P33** Condition proposed new developments to ensure convenient walking and bicycling systems that are attractive, safe, provide system continuity, and provide access to transit and other destinations, as appropriate.
- T-P34** Ensure that signs, pavement markings, pedestrian crossings, and wheelchair ramps are established and maintained to provide a high degree of safety and accessibility for pedestrians and bicyclists.



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- T-P35** Encourage or require, as appropriate, the provision of accessories, such as parking at trailheads, disabled parking, bicycle racks, bus stops, rider shelters, bike carriers on transit buses and other devices that facilitate transfers to, from and between alternative modes of travel.
- T-P36** Support the use of utility and transportation corridors both inside and outside the City for non-motorized goals and purposes.
- T-P37** Confer regularly with officials from Tahoma and Kent School Districts to evaluate changing needs for bus stops and school walking routes and respond with appropriate actions.
- T-P38** Preserve existing soft-surface trails for corridors within the City.
- T-P39** Support workshops or clinics to teach safe cycling to school age children.
- T-P40** Support and enforce laws that are designed to provide safety for pedestrians, bicyclists and people with mobility disabilities.
- T-P41** Develop and implement a system of signs that builds upon the City's streetscape and furniture theme to mark trails and non-motorized routes.

TRANSIT AND TRAVEL DEMAND MANAGEMENT

- T-P42** Consider measures that encourage and support the use of transit, ridesharing, transportation demand management, and non-motorized travel.
- T-P43** Work with King County Metro Transit and Sound Transit to enhance transit service to Maple Valley and surrounding communities and to ensure that public transportation is a viable option.
- T-P44** Support development of an integrated, multimodal, regional transportation system that serves the needs of Maple Valley and which provides alternatives to the drive-alone commute. Work with regional transit providers to develop and operate a regional system that is efficient and easy to use.
- T-P45** Encourage and support transit services and facilities that meet the needs of persons with disabilities, the elderly, the young, low-income populations, and people with special needs.
- T-P46** Support and promote commute trip reduction (CTR) programs, telecommuting, electronic communications, variable work weeks, flextime, and a variety of transportation demand management (TDM) strategies aimed at reducing the number and length of car trips and increasing the efficiency of the transportation system.
- T-P47** Implement programs that are consistent with countywide and regional mode-split goals and policies for reducing single-occupancy vehicle travel.
- T-P48** Work with King County Metro, Sound Transit, WSDOT and other agencies to locate, construct and operate park-and-ride and park-and-pool lots to serve the City and southeast King County.
- T-P49** Coordinate with transit providers to locate and develop bus stops, add or improve shelters, and expand and add new Park and Ride lots.



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Goals & Policies

PARKING

- T-P50** Require appropriate levels of parking for all land uses, consistent with the City's Vision.
- T-P51** Establish minimum and maximum levels of parking that should be provided for commercial uses.
- T-P52** Establish the appropriate role and design of parking facilities for commercial uses to provide parking opportunities but which do not promote excessive drive-alone trips.
- T-P53** Provide for and encourage use of shared parking facilities.
- T-P54** Develop regulatory incentives for reduced parking requirements based upon provisions for multimodal facilities and transportation services.
- T-P55** Encourage installation of parking to accommodate electric vehicle charging stations in private and public developments.
- T-P56** Encourage below grade parking under commercial, retail, and residential buildings, and encourage the use of on-grade multi-story parking structures to reduce the amount of land set aside for required parking. Consider height or density bonuses to offset some of the additional cost of these options.

LAND USE AND ECONOMIC DEVELOPMENT

- T-P57** Provide adequate transportation facilities and services to promote and support economic development and accommodate anticipated growth.
- T-P58** Provide transit, walking, and bicycling opportunities to enable mobility concurrent with new growth and reduce dependency on single-occupancy vehicle travel.
- T-P59** Encourage shorter vehicle trips, access to transit, and travel by bicycle and pedestrian modes through encouraging a mix of complementary land uses throughout Maple Valley.
- T-P60** Reduce vehicle trip generation by locating commercial activities and other uses in a manner which combines vehicle trips and decreases overall parking demands.
- T-P61** Design and construct transportation facilities to safely and efficiently support the movement of regional and local freight.

ENVIRONMENTAL QUALITY AND SUSTAINABILITY

- T-P62** Identify, evaluate, and fully consider environmental impacts of transportation facilities and operations. Pursue transportation projects, programs and investment strategies consistent with noise reduction, air quality and water quality objectives.
- T-P63** Support the development and implementation of a transportation system



TRANSPORTATION

Goals & Policies

- that is energy efficient and improves system performance.
- T-P64** Develop the transportation system that minimizes the negative impacts to human health and promotes active transportation, encourages physical activity, and overall improved safety for a healthy community.
 - T-P65** Coordinate with county, regional, state, and federal agencies air quality standards to ensure that the City's transportation projects and programs conform to state and federal law
 - T-P66** Consider strategies to address air quality standards and reduce greenhouse gas emissions such as promoting compact development, efficiently managing the operation of the transportation system, implementing Transportation Demand Management programs, and expand local employment growth in order to reduce vehicle miles traveled leading to lower impacts on air quality.
 - T-P67** Participate in efforts by county, regional, and state agencies to improve programs and management strategies designed to prevent and reduce contamination of street runoff and storm water.
 - T-P68** Participate in efforts by WSDOT and public transportation providers to identify, design, and incorporate noise mitigation measures into existing and planned traffic and transit operations and capital improvements.
 - T-P69** Review proposed roadway corridors for potential impacts to identified critical areas and identify reasonable alternatives to these proposed alignments, avoid such alignments, and mitigate and minimize impacts.
 - T-P70** Promote use of low impact development (LID) and best management practice (BMP) techniques in the planning, design, and construction of transportation system improvements.
 - T-P71** Design transportation facilities to advance cleaner, more sustainable mobility that fits within the context of the built or natural environments in which they are located. This includes green streets and context-sensitive designs.
 - T-P72** Promote the accommodation and develop standards for electric vehicle charging / battery exchange stations.

FINANCING

- T-P73** Pursue and implement transportation financing methods, such as transportation benefit districts or user fees (as allowed by state law), to support ongoing maintenance, preservation, and operation of the City's transportation system.
- T-P74** Ensure that new development pays a proportionate share of the costs of transportation facilities needed to support growth. New development may contribute to the costs of needed improvements through: SEPA-based mitigation, traffic impact fees, frontage improvements, local improvement districts, and other means allowed by State and local laws.



TRANSPORTATION

Goals & Policies

- T-P75** Structure developer impact fees to ensure that new development contributes its fair share of the resources needed to mitigate the impact on transportation facilities, as allowed under State law.
- T-P76** Continue to work with Black Diamond, Covington, and King County to mitigate transportation impacts of development on Maple Valley and vice versa.
- T-P77** Continue to develop partnerships with WSDOT, King County, Metro Transit, and local agencies to define and fund improvement projects and programs.
- T-P78** Actively pursue grants individually or with other agencies to help fund transportation projects to support the maintenance, operations, and upgrading of the transportation system.
- T-P79** Actively lobby the State DOT and Legislature to uphold its responsibility in providing funding to Maple Valley for transportation improvements on SR 169 and SR 516 to stimulate economic development, improve safety and enhance the quality of life in our community.
- T-P80** Use funds from the Storm Water Management Fee to help pay for the costs of water quality facilities that are constructed as part of the transportation improvement projects.
- T-P81** Evaluate project design strategies that can reduce costs of transportation improvements or provide for phasing of improvements to spread the costs over time.
- T-P82** Balance the estimated expenditures in the City's annual Six-Year Transportation Improvement Program (TIP) with available revenues.
- T-P83** Periodically review longer range transportation funding options and consider changes in the level of service standard or land use element if sufficient funding is not available



PARKS & RECREATION

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**PARKS & RECREATION**

Support Analysis

INTRODUCTION

The Parks and Recreation Element summarizes and relies on technical information provided in the 2014 Parks, Recreation, Cultural and Human Services (PRCHS) Plan, which establishes the City's path forward for providing high quality, community-driven parks, trails, natural areas and recreational opportunities throughout Maple Valley. The 2014 PRCHS Plan included revisions to City service standards and addressed action items and other management considerations toward the continuation of quality recreation opportunities for City residents and visitors. This chapter discusses community demand for parks and recreation facilities, provides goals and policies and offers a capital facilities plan and implementation strategies to further enhance the City's parks system.

Residents of Maple Valley benefit from a diverse array of natural areas, public and private parks and recreation facilities in and around the City. Maple Valley has over 700 acres of park and open space lands located within the City and in the immediate vicinity; this includes lands owned by the City, King County, Tahoma School District, private organizations and homeowner associations.

The City owns and maintains one active-use park (Take-A-Break), one special facility (Lake Wilderness Golf Course), one natural open space area (Fernwood Natural Area), and four undeveloped parks (Henry's Switch Park, Summit Park, Legacy Site, and the 216th Ave Park site). In addition, King County transferred ownership of Lake Wilderness Park to the City in 2003. Also in 2003, the City began offering its own recreation programs, while also looking for partnership opportunities with local, commercial and non-profit groups to offer a wider range of services to the community. Demand for services has been strong, and the number of City programs has since dramatically increased.

In addition to offering recreation programs through its own Parks and Recreation Department, the City has established partnerships with area service providers including the Tahoma Learning Community (TLC) and the Greater Maple Valley Community Center (GMVCC), as well as private vendors to provide a wide variety of programs and services to the community.

Maple Valley is not staffed as a full-service city and contracts for many of its services to help control costs and operate within its budget. The Parks and Recreation Department currently employs 6 full-time equivalent (FTE) staff, with 8.25 FTEs budgeted for 2014. Operations and capital improvement are funded from a variety of sources including the general fund, park impact fees, real estate excise taxes, grants and user fees.

The City adopted and has been following the former King County policy of requiring dedication and construction of neighborhood parks by residential developers. These parks are then transferred to a private homeowner's group to maintain and manage. The current park dedication requirement is more than adequate for the provision of small neighborhood parks, but it is inadequate for a park system as a whole. Large, multi-use community parks are needed to provide for the variety of recreation interests and activities requested by residents. Identifying, securing and financing community parkland remains a challenge as urban development makes large blocks of usable land increasingly rare.

**PARKS & RECREATION**

Support Analysis

RELATIONSHIP TO PREVIOUS PLANNING EFFORTS

Several planning documents and studies have been prepared since the City was incorporated in 1997 that have influenced parks and recreation service in the City. A summary of each of these is listed below.

- Maple Valley Revised Parks, Recreation, Cultural and Human Services Plan (2007)
The 2007 PRCHS Plan update built upon the City's first parks plan prepared in 1999. The 2007 update revised the demographic and community changes over those seven years and included an existing inventory assessment, community outreach and evaluation of future park and recreation needs.
- Maple Valley Strategic Priorities & Economic Development Recommendations (2007)
The Strategic Priorities and Economic Development Recommendations is a guiding document aimed at increasing the economic vitality and quality of life in Maple Valley. Two of the six priorities identified in these recommendations are directly related to the City's park system and are with regard to maintaining a high quality of life and enhancing the City's natural surroundings.
- Maple Valley Non-Motorized Transportation Plan (2013)
This plan provides information and guidance on existing and planned pedestrian and bicycle facilities throughout Maple Valley. It addresses the non-motorized elements within the Maple Valley Comprehensive Plan and proposes projects and programs to enhance the system of alternative transportation within the City. The plan identifies three broad goals for the planning, design and coordination for pedestrian and bikeway connections across the City. This plan was utilized to help formulate the trail goals in the PRCHS Plan and this Element.
- Lake Wilderness Park Master Plan (2007)
This site master plan provides a layout of the entire Lake Wilderness Park and the Lodge. Proposed improvements include a new dock and remodeled bathhouse at the swimming beach, new trails and waterfront promenade, amphitheater and band-shell, improvements to the Lodge rental facilities, shoreline enhancements and low impact development stormwater features.
- Summit Park Master Plan (2010)
The master plan established a design blueprint for the future development of the site which included ball fields, tennis courts, basketball court, playgrounds, skate spot and parking. The master planning process identified the challenges, opportunities, constraints and cost allowances for project implementation.



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- Legacy Site Planning Study (2005)
This site planning study was led by a project citizen advisory committee, which concluded in 2005. The report provides a blueprint for the future use of this 54-acre site, and it discusses the site's history, findings and conditions related to the potential development of the site.
- King County Open Space Plan (2010)
This plan provides demographic characteristics, open space and park definitions, an inventory of park and recreation facilities, standards, goals and objectives, recommendations and funding alternatives.
- Green to Cedar Rivers Trail Feasibility Study (2012)
This feasibility study is a high level overview that is intended to identify key considerations for future development of two trail corridors. The Green to Cedar Rivers Trail and Covington Highlands Trail are proposed to connect from the Green River to the existing Cedar River Trail, and between the Soos Creek Trail and the Green to Cedar Rivers Trail.
- King County Framework Policies for Human Services (2007)
The purpose of this plan is to identify goals, clarify roles and establish general priorities for providing human services in the County.

GROWTH MANAGEMENT ACT

The Growth Management Act (GMA) is intended to help communities deal efficiently with the challenges of growth to ensure their long-term sustainability and high quality of life. The Act identifies 14 broad planning goals to guide the development of comprehensive plans and development regulations (codified in RCW 36.70A). Four of these goals directly influence the development and implementation of the City's parks, recreation and cultural programs.

- Retain open space, enhance recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities. RCW 36.70A.020(9)
- Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water. RCW 36.70A.020(10)
- Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance. RCW 36.70A.020(13)
- Carry-out the goals of the Shoreline Management Act with regards to shorelines and critical areas. RCW 36.70A.020(14)

During the 2002 legislative session, a mandatory requirement for a park and recreation element was added to the list of required GMA comprehensive plan elements, with the state legislature finding that *"regular physical activity is essential to maintaining good health and reducing the rates of chronic disease"* and that *"providing opportunities for walking, biking, horseback riding, and other*



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regular forms of exercise is best accomplished through collaboration between the private sector and local, state, and institutional policymakers.” While the state’s lawmakers recognized the critical role of parks and recreation in community health, the GMA requirement for a parks element was suspended until sufficient funding is provided by the state. Additionally, language regarding the new parks and recreation element was further amended in 2005 changing the six-year improvement program to be a ten-year improvement program. The revised RCWs require the following:

A park and recreation element that implements, and is consistent with, the capital facilities plan element as it relates to park and recreation facilities. The element shall include: (a) Estimates of park and recreation demand for at least a ten-year period; (b) an evaluation of facilities and service needs; and (c) an evaluation of intergovernmental coordination opportunities to provide regional approaches for meeting park and recreational demand. (RCW 36.70A.070(8))

This Parks and Recreation Element for the City of Maple Valley aims to meet the intent of the requirements outlined in the GMA and provide a clear direction toward the protection and expansion of recreation opportunities for the citizens of Maple Valley.

VISION STATEMENT

As described in the 2014 Parks, Recreation, Cultural and Human Services Plan, the following vision statement is a guiding force for City efforts and was an outgrowth from resident feedback regarding their interests, needs and preferences for parks and recreation services.

The Maple Valley Community will provide a carefully and progressively integrated range of parks, recreation, cultural and human services. The City shall endeavor to foster creative partnerships and be responsible to the evolving needs of a growing community.

This vision provides the foundation for the goals, objectives and service standards within this Parks and Recreation Element.

PARK & RECREATION FACILITY CLASSIFICATIONS

Parkland is classified to assist in planning for the community’s recreational needs. The Maple Valley park system is composed of a hierarchy of various park types, each offering recreation and/or natural area opportunities. Separately, each park type may serve only one function, but collectively the system serves the full range of community needs. Classifying parkland by function allows the City to evaluate its needs and plan for an efficient, cost effective and usable park system that minimizes conflicts between park visitors and adjacent uses. The classification characteristics are meant as general guidelines addressing the intended size and use of each park type. The following four classifications are used by the City of Maple Valley and are defined as follows.

- Community Parks



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- Neighborhood & Pocket Parks
- Special Facilities
- Greenways & Natural Areas

Community Parks

Community parks are larger sites developed for organized play, contain a wider array of facilities and, as a result, appeal to a more diverse group of users. Community parks are generally 15 to 80 acres in size, should meet a minimum size of 15 acres when possible and serve residents within a 1 - 2 mile drive, walk or bike ride from the site. In areas without neighborhood parks, community parks can also serve as local neighborhood parks. In general, community park facilities are designed for organized or intensive recreational activities and sports, although passive components such as pathways, picnic areas and natural areas are highly encouraged and complementary to active use facilities. Developed community parks typically include amenities such as water access, court sports (basketball, tennis), covered activity areas, soccer and/or baseball fields and bike and pedestrian trails. Since community parks serve a larger area and offer more facilities than neighborhood parks, parking and restroom facilities should be provided.

Neighborhood & Pocket Parks

Neighborhood and pocket parks are generally considered the basic unit of traditional park systems. Neighborhood parks are small park areas designed for unstructured, non-organized play and limited active and passive recreation. Pocket parks are smallest sites used to address limited or isolated recreational needs and typically only provide a small tot lot or other limited amenities. They are generally 0.5 - 6 acres in size, depending on a variety of factors including neighborhood need, physical location and opportunity. These parks are intended to serve residential areas within close proximity (ranging from ¼- to ½-mile walking or biking distance) and should be geographically distributed throughout the community. Generally, developed neighborhood and pocket parks may include amenities such as pedestrian paths, picnic tables, benches, play equipment, a multi-use open field for informal play, sport courts or multi-purpose paved areas and landscaping. The primary distinction between these two park types is that of usable, functional recreation space.

Maple Valley's standing policy is that neighborhood and pocket parks are provided for and maintained by private entities and homeowner associations as new residential construction occurs throughout the City. For these parks that are owned and maintained by homeowners associations, they serve only the members of the respective homeowners association and are not accessible and available to the general public. To address potential parkland distribution or equity concerns about private neighborhood parks, the City may choose to acquire additional land to provide the City's residents access to publicly-held land of this park type.



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Greenways & Natural Areas

Greenways provide green connections between parks, schools, natural areas and other destinations. Greenways provide for connected or linked open space corridors that can support broader ecological functions than stand-alone properties. Greenways may serve as trail corridors, and provide for low-impact or passive activities, such as walking and nature observation. Natural areas are individual tracts of open space that are not connected to a larger greenway network. These lands are usually owned or managed by a governmental agency, which may or may not have public access. This type of land often includes wetlands, steep hillsides or other similar spaces. In some cases, environmentally sensitive areas are considered as part of greenways or natural areas and can include wildlife habitats, stream and creek corridors, or unique and/or endangered plant species.

Special Facilities

Special facilities include single-purpose recreational areas or stand-alone sites designed to support a specific, specialized use. This classification includes stand-alone sports field complexes, golf courses, recreation centers, sites of historical or cultural significance, such as museums, historical landmarks and structures, and public plazas in or near commercial centers. Specialized facilities may also be provided within a park of another classification. No standards exist or are proposed concerning special facilities, since facility size is a function of the specific use.

PARK & FACILITY INVENTORY

The City of Maple Valley benefits from a diverse array of natural areas, public and private parks and recreation facilities. As outlined in the 2014 PRCHS Plan, the City directly provides over 320 acres of public parkland and recreation facilities distributed among 9 parks, special facilities and natural areas. Figure 5.5 illustrates the location of City-owned parks, homeowner association parks and existing trail and bikeway corridors.



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Park Name	Current Classification	Status	Acreage
Lake Wilderness Park	Community Park	Developed	89.38
Summit Park Site	Community Park	Undeveloped	23.97
<i>Subtotal</i>			<i>113.35</i>
Take-A-Break Park	Neighborhood Park	Developed	1.92
<i>Subtotal</i>			<i>1.92</i>
Lake Wilderness Arboretum	Special Facilities	Partially Developed	25.06
Lake Wilderness Golf Course	Special Facilities	Developed	106.40
<i>Subtotal</i>			<i>131.46</i>
216th Avenue Site	Greenway & Natural Area	Undeveloped	5.17
Fernwood Natural Area	Greenway & Natural Area	Undeveloped	5.96
Henry's Switch Site	Greenway & Natural Area	Undeveloped	15.54
Legacy Site	Greenway & Natural Area	Undeveloped	50.37
<i>Subtotal</i>			<i>77.04</i>
Total Acreage			323.77

Figure 5.1 - Existing Inventory: City-owned Parklands by Type

Through its policy of requiring new developments to provide neighborhood parks and set aside open space tracts, residents of Maple Valley have benefitted from an expanded network of recreational lands and natural areas. The private parks and open space tracts complement the existing public parklands. In total, over 196 acres of private open space (excluding Elk Run golf course) have been set aside to date, with approximately 76% as greenway or natural areas. Overall, residents of Maple Valley have access to over 700 acres of public and private lands, which include City facilities, private parks, private facilities and the recreational portions of local school properties. This accounting excludes the King County owned natural areas along the City's eastern border.

Parkland Classification	Acreage
Community Park	113.35
Neighborhood Park	1.92
Special Facilities	131.46
Greenway	77.04
School Sites (recreation lands)	39.50
Private HOA Parks	51.22
Private Special Facilities	145.23
Private Open Space Tracts	144.90
Total Acreage	704.62

Figure 5.2 - Public & Private Parklands by Type



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Support Analysis

The City of Maple Valley has approximately 2.7 miles of trails and walking paths located on City parkland. Walking paths exist within developed parks, such as the Lake Wilderness Arboretum and Lake Wilderness Park. Also, King County manages over 8 miles of trails in close proximity to the City along the Lake Wilderness Trail and Cedar River Trail.

Trail Name	Ownership	Mileage
Lake Wilderness Park	City of Maple Valley	2.7
Cedar River Trail	King County	0.5
Lake Wilderness Trail (CGRT)	King County	4.6

Figure 5.3 - Existing Trails

In addition to park and open space lands, several recreation and athletic facilities exist within the City. Figure 5.4 lists these facilities by type and ownership.

	Facility Type								
	Regulation Baseball	Youth Baseball ⁽¹⁾	Regulation Softball	Regulation Soccer	Youth Soccer ⁽¹⁾	Football	Multi-Purpose Backstops	Tennis Courts	Gymnasiums ⁽²⁾
City of Maple Valley	-	-	1	-	-	-	1	2	-
King County	-	-	-	-	-	-	-	-	-
Tahoma School District	-	6	-	-	7	-	7	-	4
Private	-	-	-	-	-	-	-	-	-
TOTAL	0	6	1	0	7	0	8	2	4

NOTES:

(1): Fields at Tahoma School District elementary schools are multi-use and are available for youth baseball and soccer

(2): Gymnasiums are small and not suited for more than elementary-age use

Figure 5.4 - Existing Inventory of Recreation Facilities

Overall, the Tahoma School District is the primary field provider, with field scheduling coordinated by the Tahoma Sports Council. City recreation programs, private and non-profit groups provide programming. The sport field shortage is largely a result of low inventory and limited land base, but other complicating factors exist, such as poor field conditions, scheduling conflicts and use of fields by regional teams. As greater field demand is created with growth, the City should take a leadership role in addressing the provision of field space and coordination with the School District and leagues.



Element 5

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Support Analysis

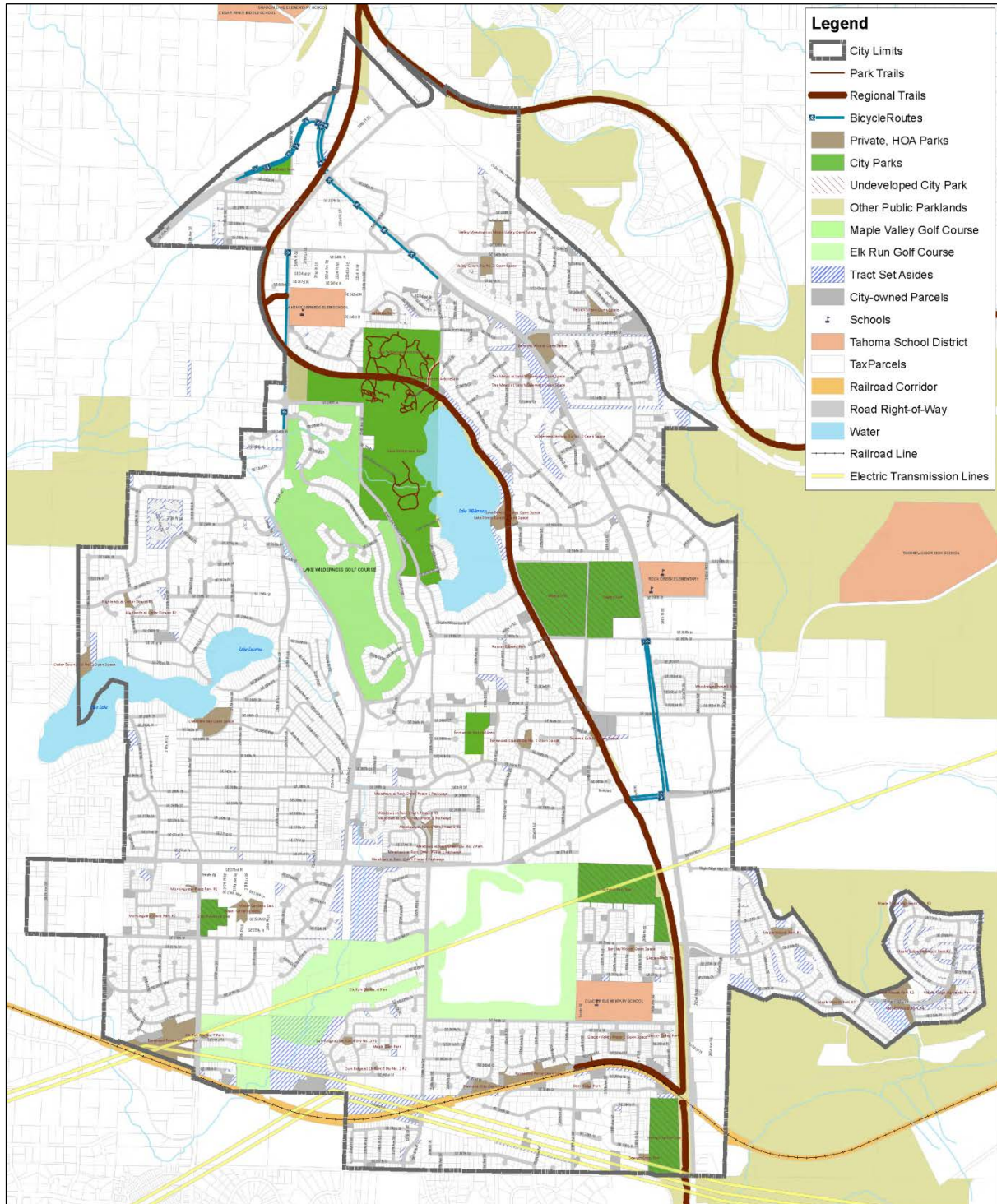


Figure 5.5 – Existing Parks, Trails and Natural Areas



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Support Analysis

DEMAND & NEED ANALYSIS

Parks, trails, recreation programs and open spaces enhance the quality of life for City residents. This has been articulated by residents who attended public open house meetings for the 2014 PRCHS Plan and validated by community survey results that rank very highly the importance of parks and recreation. The protection and expansion of recreation opportunities are critical to growth of the City and well-being of its residents. Continued urban development not only creates intense wear on the more environmentally-sensitive and appealing features of existing parks, such as the shoreline of Lake Wilderness Park, but also may preclude the purchase and development of some of the larger or unique tracts of land that may be suitable as future community parks or greenway corridors. Without additional acquisitions or parkland dedications, existing facilities may become increasingly overcrowded and the variety and availability of recreational activities would be diminished.

To determine specific recreational needs for the Maple Valley planning area, several analytical methods were used. These included a numeric review of level of service, geographic gap analysis to assess parkland deficiencies, a review of the results of a citywide survey and a review of national trends. It should be noted that even with all the statistical information available, a certain amount of subjective analysis and professional experience is necessary to quantify the standards.

Standards & Levels of Service

Two terms are commonly used to describe a jurisdiction's target for parkland coverage and measure performance in serving residents with access to parks, trails and greenways. **Service standards** are the adopted guidelines or benchmarks the City is trying to attain with their parks system. In Maple Valley, the service standard is expressed in terms of overall acres of parkland per 1,000 residents. The **level of service** is a snapshot in time of how well the City is meeting the adopted standards. The level of service is often described in terms of current need or projected need for each of the park types or facilities.

The 2014 Parks, Recreation, Cultural and Human Services Plan identified and detailed separate service standards for parks and sport facilities. The following tables illustrate these standards.

Facility Classification	Service Standard
Community	6 acres per 1,000
Neighborhood & Pocket	2.5 acres per 1,000
Baseball Fields	1 field per 5,000
Softball Fields	1 field per 5,000
Soccer Fields	1 field per 5,000

Figure 5.6 - Park Land & Recreation Facility Standards

Proximity and accessibility are also used to evaluate the City's level of service for parks. The proximity guidelines are that a neighborhood park is available within ¼- to ½-mile walking distance



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and a community park is available within 1- to 2-mile drive from all residences. Topography, physical barriers, visibility, public availability, affordability of activities, pedestrian trails and public transportation patterns can also make parks either more, or less, accessible. Maps within the 2014 PRCHS Plan illustrate the application of these proximity guidelines in the form of a watershed gap analysis based on travel distances along the street network.

Table 6 illustrates the current level of service by parkland classification. In comparing the current level of service to the service standard, the performance ratio shows how well the City is doing in meeting the various service standards. Based on the current inventory of parklands, the City has an existing acreage deficit for community and neighborhood parks. In part due to the existing deficits across all categories of parkland and recreation facilities, the 2014 PRCHS Plan outlined an overall consolidation and reduction in service standards and eliminated numeric standards for trails, special facilities and greenways.

Type	Service Standard	Inventory *	Current (2014) Level of Service	Current (2014) Performance to Standard
Community	6 ac/000	113.35	4.74	79.0%
Neighborhood & Pocket	2.5 ac/000	53.14	2.22	88.9%
Special Facilities	--- ac/000	276.69	---	NA
Greenways & Natural Areas	--- ac/000	221.94	---	NA
	8.5 ac/000	665.12	6.96	

* NOTE: Current Inventory column includes currently undeveloped sites and private parklands

Figure 5.7 - Current Level of Service by Parkland Classification

Park & Facility Needs

As the City of Maple Valley grows, new parklands will need to be acquired (or dedicated) and developed to meet the increasing demand for recreation amenities. Although neighborhood parks within Maple Valley generally are developed as part of private residential developments, homeowner groups define the access rules and maintain the park properties. Some of the neighborhood parks are available for non-members, while others are exclusive. Take-a-Break Park is the only City-owned neighborhood park.

Using the City's current and projected population figures, the amount of parkland acres needed by classification to meet the adopted service standard is shown in Table 7 below. Over the next ten years, the City needs to add over 60 acres of parks to maintain the service standards for community and neighborhood parks.



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Support Analysis

Type	Service Standard	Inventory *	Current (2014) Surplus / (Deficit)	Projected (2025) Surplus / (Deficit)
Community	6 ac/000	113.35	(30.1)	(46.8)
Neighborhood & Pocket	2.5 ac/000	53.14	(6.6)	(13.6)
Special Facilities	--- ac/000	276.69	---	---
Greenways & Natural Areas	--- ac/000	221.94	---	---
	8.5 ac/000	665.12	(36.7)	(60.5)

* NOTE: Current Inventory column includes currently undeveloped sites and private parklands

Figure 5.8 - Current & Projected Parkland Demand by Classification

The analysis of parkland needs identified the following:

- Neighborhood parks currently are being provided at a level near the adopted service standard. As the community continues to grow, the projected deficit of neighborhood parklands reaches 13.6 acres by 2025. While city policy requires that each subdivision provides a private neighborhood park, the number and location of these parks will be determined by the size and location of future subdivisions.
- Based on a current deficit of 30 acres and on a one-mile service area guideline, there is a need for a community park in the south-central/southwest area of the city. The acquisition of additional land will help the City reach its community park service standard into the future.

In addition to strict numerics, a gap analysis of the park system was conducted to examine and assess the current distribution of parks throughout the City. The analysis reviewed the locations and types of existing facilities, land use classifications, transportation/access barriers and other factors as a means to identify target areas representing service gaps. In reviewing parkland distribution and assessing opportunities to fill identified gaps, residentially zoned lands were isolated, since neighborhood and community parks primarily serve these areas. Additionally, primary and secondary service areas were used as follows:

- Community Parks: ½-mile primary & 1-mile secondary service areas
- Neighborhood & Pocket Parks: ¼-mile primary & ½-mile secondary service areas

The gap analysis also reviewed the need for parkland after considering the existing private homeowner association parks, along with the distribution of private condominium or apartment complex recreation common areas. It should be noted that the park walksheds for the private parks were restricted to the actual homeowner association boundaries of the respective parks.

Figure 5.12 highlights how the public neighborhood parks and private parks enhance the overall coverage of parklands in Maple Valley and identifies key gaps in service. Gaps in parkland distribution appear in four main areas of the City:



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- Southwestern section near Elk Run Golf Course
- Western section north of Lake Lucerne
- Northeastern section north of Rock Creek Elementary
- City center near Fernwood Natural Area

The greatest documented need is for additional community parks to improve overall distribution and equity, while promoting active use recreational spaces that can accommodate field sports, court sports and open play. The Capital Facilities Plan identifies several proposed projects, such as the development of Lake Wilderness Park and Summit Park, to meet the expected demand for developed park space. The development of these sites, in addition to future planned park acquisition and development, will significantly reduce the overall system deficits.

Table 8 shows the current and projected need for athletic fields. A significant number of athletic fields is required to meet the current and projected demand.

Type	Existing Standard	Current Inventory	Current (2014) Surplus / (Deficit)	Future (2025) Surplus / (Deficit)
Baseball Fields	1 fields/5000 people	0	(5)	(6)
Softball Fields	1 fields/5000 people	1 field	(4)	(5)
Soccer Fields	1 fields/5000 people	0	(5)	(6)

Figure 5.9 - Current & Projected Recreation Facility Demand by Type

There is a significant shortage of youth baseball, softball and soccer fields. The existing fields are in poor condition, are suitable only for youth play, are multi-use and cannot be used year-round. The pending development of synthetic turf fields at Ravensdale Park will greatly improve field availability for local teams; however, significant land base must be made available to provide the identified number of future fields. The future development of Summit Park and on-going coordination with the Tahoma School District may help meet some of the current demand, but additional community park land or interagency arrangements will be necessary to fully meet the proposed need for sport fields.

Trails & Pathways

The 2014 PRCHS Plan eliminated the previous trail facility mileage standard. Numeric standards for trails are not an optimal guideline, since the greater intent of a trail network is more related to community connectivity and access, rather than a per capita distance measurement. The elimination of the mileage-based standard for trails does not diminish or reduce the importance of or value in continuing to expand and grow the trails network; this adjustment is merely to re-orient the City's efforts toward a policy-based approach to trail connectivity.

Maple Valley is fortunate to have two major regional trails pass through or near the City. As more residents adopt active lifestyles, these trails offer an unparalleled recreation opportunity. As with

**PARKS & RECREATION****Support Analysis**

parklands, a gap analysis was conducted on the existing trail network, and discrete walksheds were generated using known trail access points. Through continued coordination and discussions with King County, Covington and Black Diamond, the City should seek ways to facilitate the improvement to or expansion of the regional trail network via the proposed Tri-Cities Trail. Additionally, paving and upgrading the Lake Wilderness Trail will create a more prominent active transportation and recreational spine through the core of the community that is significantly more user friendly. This trail currently abuts four City-owned park properties, and future linkages from these sites to the trail will further improve the access to, and functionality of, the trail.

The on-street bike route in the City's Non-Motorized Transportation Plan supplements the recreational trail system by providing linkages and offering connections where off-street connections are presently unfeasible. Additionally, neighborhood greenways are becoming an increasingly popular way to connect residents with neighborhood destinations like schools, parks and community centers. Neighborhood greenways make smart, strategic, cost-effective retrofits to the existing public rights-of-way to increase public access to Maple Valley's parks and greenspace assets. Low-volume streets are made more pedestrian and bicycle friendly through additional traffic calming measures. Wayfinding helps residents navigate to destinations, and landscaping provides contact to nearby nature.

Maple Valley's neighborhoods are ideally suited to neighborhood greenways. The hierarchical street network leaves a great number of streets that have a very low volume of traffic. Additionally, smart planning has left pedestrian and cyclist connections between subdivisions and adjacent schools or parks. This, coupled with the spine of Lake Wilderness Trail, has established a framework for an interconnected network for the entire city. A series of neighborhood greenways are proposed as shown on Figure 5.13. These routes primarily utilize low volume streets, but they also suggest the use of City-owned stormwater facilities or neighborhood parks as connections and throughways to provide efficient linkages and to activate these facilities.

Recreation Programs

Recreation services are available to Maple Valley residents through a wide range of public and private recreation, health and fitness providers and facilities.

Aquatic facilities are accessible within a five to 25 minute drive at the Covington, Kent Meridian or Renton aquatic centers or several different YMCAs. Adult fitness opportunities range from private specialized women's and cross-training facilities to facilities and programs offered by YMCAs and public park and recreation providers. Boys and Girls clubs are known for their youth programming offered through a variety of schools and community centers to enhance learning, fitness and social development of school age children. Youth and adult sports leagues offer individual sport team experiences that require fields, courts or gyms that are distributed in various locations, mostly outside of Maple Valley. Senior programming and age-specific facilities are available, but they are dispersed across multiple locations and are separated from intergenerational uses.



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Maple Valley's recreation services are a major community asset and support the physical, mental and social health of the community. The City currently offers a variety of programming, including fitness, sports, day camps, creative movement and a variety of other programs and special events for all ages. To continue to provide attractive, responsive and productive programs, the City should continue to:

- Enhance the diversity of programs offered, focusing on programs that are in high demand or serve a range of users
- Meet the needs of diverse users, including at-risk communities or those with special needs
- Improve the accessibility of programs, by holding classes and activities at locations throughout the community and maintaining affordable rates
- Monitor local and regional recreation trends to ensure community needs and interests are addressed by available programming

Given limited resources and the availability of recreational providers in the region, the City should continue to expand partnerships with the School District, GMVCC, private fitness clubs and the local businesses to provide recreation services. The City should also promote and coordinate recreational opportunities provided by its partners to help connect residents with options to learn and recreate.

However, to achieve these programming objectives, the City must secure additional indoor recreational space. The construction of a new, expanded community center to replace the facility that GMVCC is currently using has been a long discussed potential. Expanding indoor recreation space is a high priority because of the community's need for additional human services and flexible indoor recreational space. The City should continue to explore the potential to site and finance an indoor facility and should consider conducting an indoor recreation feasibility study to explore the options of siting, sizing, programming needs and local partnerships; such an effort could help focus a community discussion about what could be included in a new facility, its projected costs and the community willingness to support such an endeavor.

Other Active Outdoor Needs

In addition to the provision of parklands and trails, new park amenities or facilities could be considered for development within existing parks or as components of future sites.

Spraygrounds

Spraygrounds are water play features that are very popular and provide a means of integrating aquatics into parks at a relatively low cost. Maple Valley should consider at least one sprayground in a community park or as component of the swim area/beach renovation to Lake Wilderness Park, as noted in the master plan, when the timing is right for implementation of that phase.

Skateboard/BMX Facilities

As currently planned in the Summit Park master plan, the City should install a new skatepark to replace the existing skatepark located next to the Community Center. It has been noted by skaters



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and staff from the GMVCC that the existing facility is less than desirable due to its location and poor visibility for surveillance. A future facility should be designed with the input of local skaters, and should be suitable for development in phases.

Off-Leash Dog Area

An off-leash dog area provides a location where residents can exercise dogs. A one- to two-acre site should be considered for future development of an off-leash dog area in a location away from natural resource areas. Ideally, a dog park would be a component to a larger community park, where infrastructure (parking, restrooms, garbage collection) exists and supports multiple activities. Also, areas under the powerline corridors could be explored for potential candidate sites. Maple Valley should look to partnership opportunities in the development of an off leash area; communities throughout the Northwest have relied on grassroots or non-profit organizations for the on-going operations and maintenance of such facilities.

Community Gardens & Pea Patches

Gardening is a popular activity statewide, with 58% of residents reporting participation. Community gardens provide common space for residents to grow fruits, vegetables and flowers. Gardens have been shown to increase healthy food consumption, while providing opportunities for active living, social interactions and lifelong learning. Community gardens are becoming more popular park amenities in urban environments, where residents may have limited outdoor space resulting from reduced lot sizes. Gardens are also popular with a diverse range of residents.

CAPITAL FACILITIES PLANNING

The Parks and Recreation Capital Facilities Plan (CFP) lists all park and facility projects considered through 2020. Projects are listed on the following pages by name, type of improvement and estimated cost by year.

Park Type	Acquisition	Development	Renovation	Sum
Park	\$ 3,540,000	\$ 10,975,000	\$ 970,000	\$ 15,485,000
Greenway			\$ 29,000	\$ 29,000
Trail		\$ 60,000		\$ 60,000
Special Facility		\$ 60,000		\$ 60,000
TOTAL	\$ 3,540,000	\$ 11,095,000	\$ 999,000	\$ 15,634,000

Figure 5.10 – Summary of Projects (2014 – 2020)

The following Parks CFP may be modified or amended annually, as needed, with the adoption of the City's Budget and 6-Year Transportation CIP.



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Park Type	Park Site	Project Description	Activity	Priority	Funding	2014	2015	2016	2017	2018	2019	2020+	Sum
Community	Lake Wilderness Park	Replace existing doci	R	1	GF, REET	\$525,000							\$525,000
		Signage & wayfinding	D	3	GF, REET				\$20,000				\$20,000
		Play equipment upgrade	R	2	GF, REET				\$60,000				\$60,000
		Additional parking	D	1	PIF, REET, Gr, TBD	\$300,000							\$300,000
		Beach house remodel	R	1	PIF, REET, TBD		\$250,000						\$250,000
		Swim beach phase	D	2	PIF, REED, Gr, TBD				\$2,000,000				\$2,000,000
		Lodge repairs	R	2	REET, GF	\$50,000			\$50,000				\$100,000
Community	Summit Park	Site design	D	1	PIF, REET		\$125,000						\$125,000
	Summit Park	Park construction	D	1	PIF, REED, Gr, TBD			\$8,500,000					\$8,500,000
Greenway	Fernwood Natural Area	Vegetation management plan, improve trails wetland stewardship; Restoration plantings	R	2	Gr		\$20,000	\$5,000	\$3,000	\$1,000			\$29,000
		Shelter/overlook & environmental intrepreative panels	D	3	PIF, REED, Gr					\$15,000			\$15,000
Neighborhood	216th Avenue Park	Site evaluation/assessment	D	2	Gr		\$5,000						\$5,000
	216th Avenue Park	Park master plan concept	D	3	PIF, REET			\$10,000					\$10,000
Renovation	Systemwide	Repair, renovation & ADA compliance audits and upgrades	R	2	Gr		\$10,000	\$10,000	\$5,000	\$5,000	\$5,000		\$35,000
Trail	Develop neighborhood greenway plan	Develop final neighborhood greenways plan with a prioritized implementation tool kit	D	2	REET, GF		\$20,000						\$20,000
	Implement neighborhood greenway improvements	Initial signage, wayfinding and traffic calming as recommended in the neighborhood greenways plan	D	2	REET, GF, Gr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$30,000
Trail	Lake Wilderness Trail Access Improvements	Create LWT access improvements at SE 260th Street adjacent to the Legacy site	D	3	PIF, REET, Gr						\$10,000		\$10,000
Community	Community Park Acquisition	Acquire 20-40 acres (Gap Area 4)	A	1	PIF, TBD, Gr		\$3,500,000						\$3,500,000
Neighborhood	Neighborhood Park Evaluation	Assess gap opportunities for either purchasing property or converting existing stormwater property to parks	A	3	PIF, Gr		\$10,000	\$10,000	\$10,000	\$10,000			\$40,000
Special Facility	Indoor Recreation Center Study	Facility study	D	2	GF, REET		\$60,000						\$60,000
						\$875,000	\$4,005,000	\$8,540,000	\$2,153,000	\$36,000	\$20,000	\$5,000	\$15,634,000
<u>Code Funding Source</u> PIF Park Impact Fees REET Real Estate Excise Tax Priv Private Funds; Dedications; Donations Gr Grants GF General Fund/Local Share TBD To Be Determined; other funding sources needed for replacement; rehabilitation, general maintenance						<u>Code Activity</u> A Acquisition D Development R Renovation/Repair						<u>Code Priority</u> 1 High Priority 2 3	

Figure 5.11 - PRCHS Plan 6-Year Capital Facilities Plan (2014 – 2019)

**PARKS & RECREATION**

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IMPLEMENTATION STRATEGIES

The City does not currently have sufficient funding to completely address the desired need for parks and recreation facilities throughout the community. However, the City successfully has allocated a portion of its General Fund resources to parks capital projects and facility maintenance. Based on a review of potential funding sources to address the anticipated funding deficiencies, recommended actions are as follows:

Partner Coordination & Collaboration

Internal coordination with the Public Works and Community Development departments can increase the potential toward the implementation of the proposed trail and neighborhood greenways network, which will rely on ensuring connectivity within and to adjoining subdivisions. Coordination with the Community Development Department will be crucial in reviewing development applications with consideration toward potential parkland acquisition areas and for easement or set-aside requests. Coordination with the Public Works Department also is necessary to explore the potential of repurposing certain stormwater facilities to serve a secondary role as recreational areas. However, to more fully extend the extent of the park system and recreation programs, additional partnerships and collaborations should be sought.

The City should discuss the terms of and prepare an interlocal agreement with the Tahoma School District to formalize the use of District gymnasiums and other facilities for recreation programs and classes. Additionally, an interlocal agreement should address and detail the roles and responsibilities for the development, maintenance and use priorities regarding the development of the Summit Park site.

Maple Valley should explore partnership opportunities with regional health care providers and services, such as MultiCare, Valley Medical and the King County Health Department, to promote wellness activities, healthy living and communications about the benefits of parks and recreation. For example, this group could more directly cross-market services and help expand resident understanding of local wellness options, and they could sponsor a series of organized trail walks throughout Maple Valley as a means to expand public awareness of local trail opportunities and encourage residents to stay fit.

The City should continue to facilitate discussions with local youth leagues and staff from King County, Covington and Black Diamond and the Tahoma School District for the purposes of sport field planning and financing a multi-field complex. A complex of four fields or more could provide field rental revenue, as well as additional tourism revenue, from leagues or sport clubs interested in hosting tournaments.

The City should reach out to the property owners of certain private open space tracts that were set aside through the land development process for the potential to utilize some of these lands for trail or neighborhood greenway linkages.



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Park Impact Fees

Park Impact Fees (PIF) are imposed on new development to meet the increased demand for parks resulting from the new growth. PIF can only be used for parkland acquisition, planning, and/or development. They cannot be used for operations, maintenance or repairs of parks and facilities. The City of Maple Valley currently assesses impact fees, but the City should review its PIF ordinance and update the methodology and rate structure as appropriate to be best positioned to obtain future acquisition and development financing from renewed residential development. Once revised, the methodology and rates should be forwarded to City Council for review and approval. The City should prioritize the usage of PIF to secure additional community parkland and consider the potential to match PIF with a councilmanic or voter-approved bond to have the requisite capital to purchase key properties and develop new community park amenities.

Other Local Funding

Although a variety of approaches exist to support individual projects or programs, the broader assessment of community needs suggests that additional, dedicated funding may be required to finance upgrades to and growth in the parks system. In 2013, City Council committed to pursuing a capital bond to primarily support the development of Summit Park. Depending on the outcome of the negotiations with the Tahoma School District regarding the future development of that site, City Council will need to reassess the scope of a bond and strategize for the implementation of parks and recreation related civic infrastructure.

Also, a levy or levy lid lift could be used to fund ongoing operating expenses, expand recreation program offerings and/or offset the maintenance deficit created by the transfer of the Lake Wilderness Park and Lodge from King County. A levy could be structured to maximize voter support to include additional park development, trail development, waterfront improvements at Lake Wilderness and general park amenity upgrades. This will require additional effort by the Parks and Recreation Commission to compile a specific funding package, along with an assessment of potential revenue, political willingness and potential voter support. Based on the 2014 Budget, the City has ample debt capacity available to it to finance these improvements.



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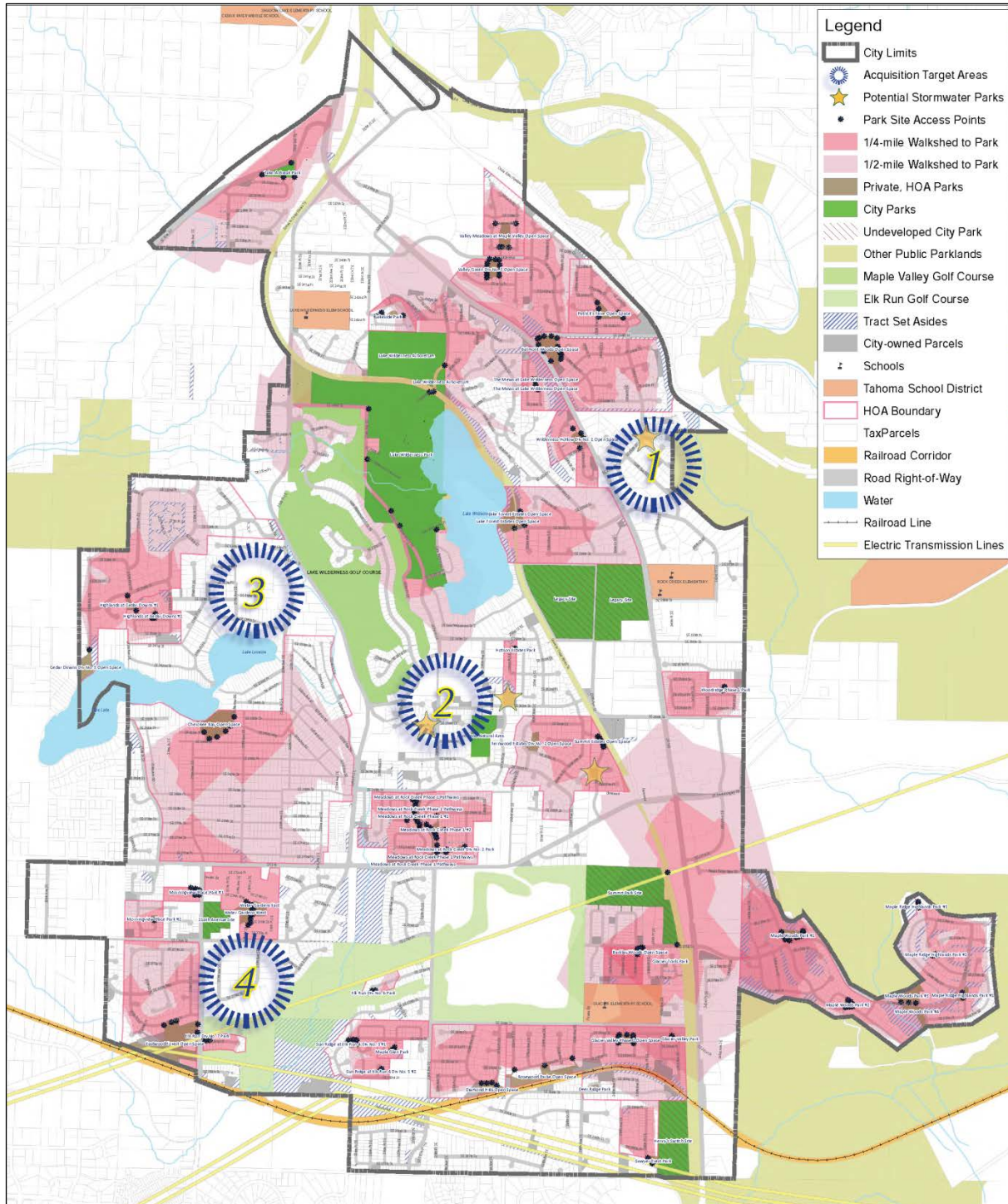


Figure 5.12 – Proposed Parks and Greenways



Element 5

PARKS & RECREATION

Support Analysis

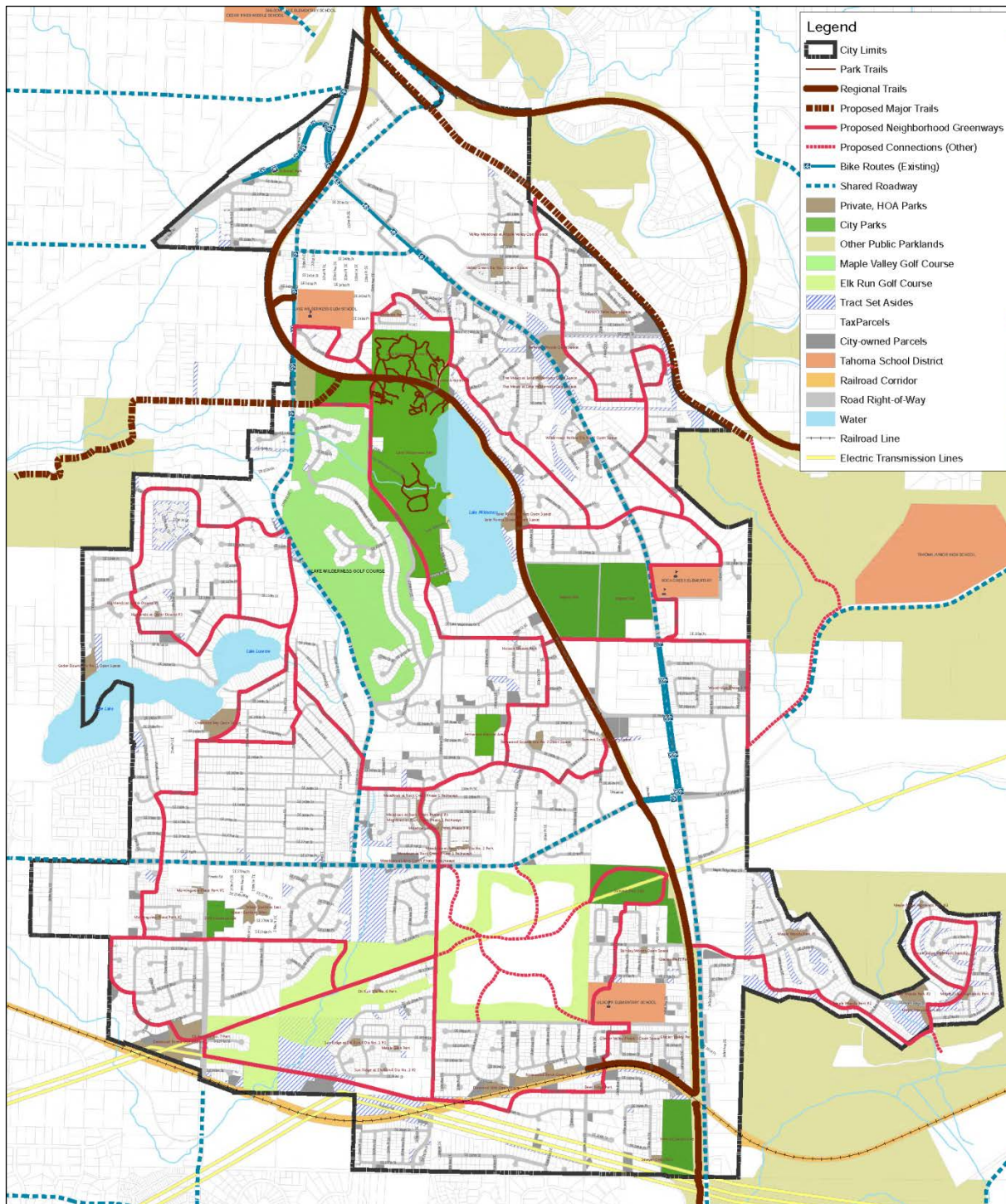


Figure 5.13 – Proposed Trails, Bikeways and Neighborhood Greenways



PARKS & RECREATION

Goals & Policies

GOALS & POLICIES

ACTIVE USE PARKS

Goal PR-1: Maple Valley's park system meets local recreation needs, supports the health and well-being of residents, and enhances the environmental and visual quality of the community.

- Policies:**
- PR-P1.1** The City shall endeavor to provide park lands at the following service standards:
 - Community Parks: 6 acres per 1,000 residents
 - Neighborhood & Pocket Parks: 2.5 acres per 1,000 residents
 - PR-P1.2** The City shall encourage the private ownership, development and management of neighborhood parks within all new residential subdivisions to provide residents with nearby opportunities for unstructured recreation.
 - PR-P1.3** The City shall strive to provide and maintain a developed community park within a 1.5 mile travelshed of all residents to provide multi-use recreation areas.
 - PR-P1.4** The City shall endeavor to provide special facilities and use areas to accommodate a variety of recreation uses, such as golf courses, sport field complexes, sites for community centers, etc.
 - PR-P1.5** The City shall support the preservation and improvement of state, county and municipal parks, trails and facilities that provide park and recreational opportunities to City residents.
 - PR-P1.6** Require dedication and development of a local neighborhood park as a condition of approval for subdivisions of four (4) or more lots. The City may accept fees in lieu of development if such mitigation is not practical (see "Funding").
 - PR-P1.7** Require that development of recreational amenities conform to the City's minimum guidelines and the general needs outlined in this Plan.

NATURAL AREA PRESERVATION & RESTORATION

Goal PR-2: Develop and promote a culture oriented to economic development in City services and communicate that priority to residents and externally.

- Policies:**
- PR-P2.1** The City shall endeavor to preserve significant natural areas to provide opportunities for residents to recreate and connect with nature and to meet habitat protection needs.
 - PR-P2.2** The City shall strive to manage City-owned natural areas to protect and enhance their ecological health, sensitive habitats, and native species.



PARKS & RECREATION

Goals & Policies

TRAIL & PATHWAY SYSTEM

Goal PR-3: Maple Valley's system of interconnected shared-use paths, trails, sidewalks, and pedestrian and bicycle corridors connect residents to parks, schools, and key destinations throughout the city. The City's trail and pathway system builds upon the existing Cedar to Green River Trail and integrates with the City's active transportation network to ensure safe, convenient, and accessible transportation options for the community.

- Policies:**
- PR-P3.1** The City shall develop a network of shared-use trails and neighborhood greenways that connect within and between parks, nearby neighborhoods, key community destinations, and major pedestrian and bicycle routes identified in the Non-Motorized Transportation Plan.
 - PR-P3.2** The City shall develop and implement a network of neighborhood greenways that increase access to parks and greenspace through the City's existing paved and unpaved facilities, greenways, forested paths and facilities along the City's roadway network.
 - PR-P3.3** The City shall ensure the City's trail and pathway network is accessible, identifiable, convenient and safe for users of all ages and abilities.
 - PR-P3.4** Require development projects along proposed designated trail routes to incorporate trail segments as part of the project.
 - PR-P3.5** Coordinate with King County and other local jurisdictions to provide a regional trail network, to include the extension of the Lake Wilderness Trail and establishment of the Covington Highlands Trail and the Tri-Cities Trail, and connect the City's trail and pathway system to regional trails.
 - PR-P3.6** Seek opportunities to develop east/west pathway, trail and sidewalk connections to complement the north/southeastern route provided by the Cedar to Green River Trail.

RECREATION FACILITIES

Goal PR-4: Maple Valley's sports fields, courts and other recreation facilities provide high-quality places for children, teens, adults and seniors to recreate and play.

- Policies:**
- PR-P4.1** The City shall provide a diversity of recreational facilities, including sports fields, courts and specialized facilities (e.g. golf courses, skate parks, off-leash areas, pea patches) to meet a wide range of community needs.
 - PR-P4.2** The City shall endeavor to develop recreation facilities that provide maximum flexibility for current uses and can be adapted for emerging sports.
 - PR-P4.3** The City shall explore options with the community for developing enhanced facilities for all age groups to include all-weather and/or illuminated sport fields.
 - PR-P4.4** The City shall collaborate with sport groups, the Tahoma School District



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and other providers to facilitate the development of a variety of affordable recreation facilities and options for residents of all ages.

PR-P4.5 The City shall maintain and manage recreation facilities to ensure the safety and enjoyment of participants and protection of the City's capital investment.

PR-P4.6 The City shall strive to develop sufficient sports fields to meet the recreational needs of Maple Valley residents. This Plan recommends a level of service standard for sports fields of:

- Baseball Fields: 1 field per 5,000 residents
- Softball Fields: 1 field per 5,000 residents
- Soccer Fields: 1 field per 5,000 residents

PR-P4.7 The city shall evaluate long term maintenance costs for park properties as a part of a bond measure or financing program to acquire additional recreational properties.

RECREATION PROGRAMMING

Goal PR-5: The City of Maple Valley offers residents a diverse array of recreational activities and programs that promotes the health and well-being of residents of all ages, abilities and interests.

Policies: **PR-P5.1** The City shall encourage the expansion of engaging, affordable and safe recreation programs and healthy alternatives for leisure time.

PR-P5.2 The City shall foster positive, collaborative relationships with recognized athletic and recreational providers and organizations to provide recreational programs.

PR-P5.3 Continue and enhance partnerships with the Greater Maple Valley Community Center, the Tahoma School District, private and non-profit agencies, private fitness clubs and local businesses to provide recreation services to the community.

PR-P5.4 Enhance the diversity of recreation programs offered, in partnership with other recreation providers and organizations, focusing on programs that are in high demand or serve a range of users.

CULTURAL & HERITAGE

Goal PR-6: Maple Valley's parks, recreation facilities and community events bring residents together and foster community pride, identity and livability.

Policies: **PR-P6.1** The City shall work with the community and recognized organizations to foster a greater number and variety of cultural events and support community celebrations.



PARKS & RECREATION

Goals & Policies

- PR-P6.2** The City shall seek opportunities to support heritage facilities within City limits.

HUMAN SERVICES

Goal PR-7: All members of the Maple Valley community have the resources and opportunities necessary to meet their basic physical, economic and social needs and to improve the quality of life for themselves and their families.

- Policies:**
- PR-P7.1** The City shall support opportunities for residents to engage in social, educational, justice, and health programs, in partnership with community agencies.
- PR-P7.2** The City shall partner with the Greater Maple Valley Community Center, Maple Valley Food Bank & Emergency Services, King County, the Tahoma School District and community organizations to provide social, educational and health programs that enrich residents' lives.

PLANNING & COMMUNITY INVOLVEMENT

Goal PR-8: Members of the Maple Valley community are actively engaged in the planning, design and stewardship of the City's parks, recreation facilities, and cultural and human services.

- Policies:**
- PR-P8.1** The City shall encourage and support active and ongoing participation by diverse community members in the planning and decision-making for parks and recreation.
- PR-P8.2** The City shall develop and maintain system-wide and site-specific plans for the development and management of the park and recreation system to guide future actions.

SITE DESIGN, DEVELOPMENT & MANAGEMENT

Goal PR-9: Maple Valley's park and recreation system is efficient to maintain and operate, and provides a high level of user comfort, safety, aesthetic quality and protects the public's capital investment.

- Policies:**
- PR-P9.1** The City shall endeavor to design, develop and manage the City's park sites and facilities to ensure the safety and enjoyment of users, maximize recreational experience and minimize maintenance and operational costs.
- PR-P9.2** The City shall strive to reduce barriers to participation and ensure facilities and programs are accessible and welcoming to all users.
- PR-P9.3** The City shall provide informative, convenient, and consistent signage; communication and informational materials to help residents fully utilize the City's recreational resources.



PARKS & RECREATION

Goals & Policies

FUNDING

Goal PR-10: Maple Valley's park, recreation, natural areas, and cultural facilities and programs are supported by varied, dependable and sustainable funding sources.

- Policies:**
- PR-P10.1** The City shall use a variety of funding sources to adequately and cost-effectively acquire, develop and maintain park and open space land.
 - PR-P10.2** The City shall require dedication of parkland, recreational areas, and/or open space or a fee in lieu of dedication in conjunction with all new residential development, consistent with the requirements of the City's Development Regulations.
 - PR-P10.3** The City shall pursue traditional and alternative funding sources for parks, facilities and programs to include private donations, partnerships, sponsorships, state and federal grant sources, dedicated local taxes and local bonds or levies.
 - PR-P10.4** The City shall manage and update the Park Impact Fee program to ensure new development contributes its proportional share toward the provision of community park lands and facilities to meet adopted service standards.

ADMINISTRATION

Goal PR-11: Maple Valley's Parks and Recreation Department coalesces the community and stewards its human, social and physical capital and resources to expand recreational opportunities for City residents.

- Policies:**
- PR-P11.1** The City shall strive to provide sufficient staff resources to maintain the overall parks and recreation system to the City's standards.
 - PR-P11.2** The City shall promote volunteerism to engage individuals, groups, organizations and businesses in the planning, development and stewardship of the park and recreation system.

**ENVIRONMENTAL QUALITY**

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**ENVIRONMENTS QUALITY
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ENVIRONMENTAL QUALITY

Support Analysis

INTRODUCTION

The purpose of the Environmental Quality Element is to expand upon the community's commitment to the stewardship of the natural environment, and to provide a basis for policies to guide City decisions which affect the natural environment. The residents of Maple Valley recognize that the quality of life they perceive is directly associated with the quality of the environment. This environment is a complex system of interrelated components upon which the City depends, including air, water, soils, plants and animals. Historically, people have come to Maple Valley because these components have remained relatively pristine. More recently, these components have become increasingly impacted by human activity. The value of understanding the relationship between Maple Valley residents and the natural environment is to realize the importance of maintaining it as a mutually supportive one and to balance competing objectives to the maximum extent possible.

The State Growth Management Act (GMA) contains the following goal: to “protect the environment and enhance the State’s high quality of life, including air and water quality, and the availability of water.” Moreover, the GMA contains specific requirements for the designation and protection of “**critical areas**,” defined by the GMA as *wetlands, areas with critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas*. The GMA requires jurisdictions to adopt interim critical areas, and regulations to protect those areas, prior to the adoption of the Comprehensive Plan, and to finalize such regulations following Plan adoption.

This chapter is divided into the following sections for purposes of discussion and mapping:

- Critical Areas
The natural water system (watersheds, subbasins, lakes and wetlands, noxious weed eradication projects, streams, floodplains, and groundwater recharge areas); soils and topography (including geologic hazard areas); and plants and animals (including wildlife habitat).
- Goals and Policies
The policies and strategies to guide the City in protecting the natural environment.

Most of the discussion in this element is about critical areas, because of their vital environmental importance. They include areas which:

- Are subject to natural hazards;
- Contain significant renewable resources;
- Support unique, intrinsic, fragile or valuable elements of the natural environment;
- Contain valuable cultural resources;
- Contain protective buffers necessary to protect public health, safety and welfare; or
- Include state or federal protected species.



ENVIRONMENTAL QUALITY

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The critical areas located inside the Maple Valley City limits include streams and wetlands, erosion hazard areas, and aquifer recharge areas. Flood plains, landslide areas and seismic hazard areas are located adjacent to or just northeast of the City in the Cedar River Valley, or what is now known as Old Maple Valley. According to the *Tahoma Raven Heights Communities Plan*, sensitive areas that are of significant concern in the Maple Valley area and surrounding communities are stream corridors, flood hazard areas, groundwater recharge areas, and wildlife habitats.¹ Critical areas have been mapped and calculated to determine relative impacts to future land use planning. These areas are listed in the following table:

Undeveloped Critical Areas – City of Maple Valley (in acres)					
Geologic Hazard Area			Wetland	Floodplain	Total
Erosion	Landslide	Seismic			
62	7	4	9	0	82

Source: Earth Tech, 1998

Figure - 6.1 Undeveloped Critical Areas

There are a total of 82 acres of critical areas representing nine percent of total undeveloped land in the City. The calculations do not include areas highly susceptible to groundwater contamination (which underlay approximately half of the City's entire area) or the City's lakes and stream corridors.

NATURAL WATER SYSTEM

Water is a powerful force that constantly shapes the form and function of the land. Stream channels by their very nature migrate to accommodate changes in the water, landscape and ecosystem. Heavy rains scour channels out, and re-deposit loose material downstream. Surface chemicals from one location are dissolved and carried to another, usually a wetland or lake where water is filtered. As urban development occurs, native vegetation and absorbent top soils are removed, land becomes compacted and paved, existing site topography is changed, and natural water courses are often realigned. Such landscape changes alter the way water moves, add to existing hazards associated with natural drainage systems, and affect the habitat, recreational, and scenic value of water resources.

The natural water system in Maple Valley exists within two major watersheds (or basins): the Green River (Soos Creek Basin) and the Cedar River watersheds. The watersheds comprise subbasins, streams, wetlands, lakes, and a dynamic exchange between the surface and groundwater flows. The primary sources of water for Maple Valley's lakes and wetlands are direct precipitation, surface water runoff, flows from rivers and streams, and subsurface flows of groundwater. The water leaves the lakes and wetlands primarily through direct evaporation, surface outflows, and seepage into groundwater.

¹ King County Planning Division: *Tahoma Raven Heights Communities Plan*, May, 1982, p. 59.



ENVIRONMENTAL QUALITY

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Protection of the natural water system is important for many reasons, including flood control and fish/wildlife habitat protection. The protection of surface water is specifically important because it filters through areas of highly permeable soil into the groundwater, or aquifers, which have historically been the primary source of drinking water for Maple Valley.

Watersheds

The southern and western portion of the City of Maple Valley is located in the Soos Creek Basin which drains into the Green River. Tributaries to Big Soos Creek include the Upper Jenkins Creek Subbasin, the Lake Lucerne Subbasin (which includes the Lake Lucerne, Pipe Lake and Lake Wilderness drainage areas), and the Lake Sawyer Subbasin. Most of this area ultimately drains to Jenkins Creek, which flows into Big Soos Creek and ultimately drains to the Green River east of Auburn. The cities of Kent and Tacoma rely upon the Soos Creek Basin for their drinking water supply.

The northern and eastern portion of Maple Valley (the area located between State Highway 169 and the Cedar River) is in the Lower Cedar River Basin. This is a 66-square-mile basin encompassing 15 tributaries from the upland head of the stream at the Landsburg Dam, to the lowland mouth at Lake Washington in Renton. The City of Seattle relies upon the Upper Cedar River Basin for its drinking water.

Lakes and Wetlands

Maple Valley's lakes and wetlands, and associated riparian areas, perform valuable functions within Maple Valley's ecosystem. They receive surface water from the surrounding area and filter pollutants entering the system by a combination of physical, chemical and biological processes. They also provide drainage, flood storage, and wildlife habitat as well as recreational opportunities for local residents. They are an important aesthetic component to the City's quality of life. The historic practice of clearing vegetation in wetlands, or grading, filling, draining, and other land development activities, has often destroyed the wetlands and streams, or in many cases decreased their ability to provide these important functions.

The State of Washington defines wetlands as:

"Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands



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may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

This definition of wetlands is the same as that used by the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act.² The City's lakes are prime focal points for open water and wetland plant and animal species.

Wetlands in Maple Valley were mapped as part of the King County Wetlands inventory, and can be found in the *King County Sensitive Areas Map Folio*. This inventory focused on the larger wetlands of the County. There may also be smaller wetlands in Maple Valley that have yet to be formally identified and mapped (e.g., the Meadows area). The major wetlands in Maple Valley are generally distributed throughout a mile-wide strip that runs from north to south through the middle of the City (northwest and southwest of Lake Wilderness). One of the only wetlands in the City that appears to be undeveloped is located along the west side of Witte Road between SE 259th Street and SE 264th Street. The largest wetland, now partially developed as Elk Run Golf Course, is located further south between S.E. 268th and 276th Street. These wetlands serve as important flood and storm water storage areas during heavy storm events.

Maple Valley's lakes are classified as shorelines. The three main lakes in the City of Maple Valley are Lake Wilderness, Pipe Lake, and Lake Lucerne.³ They are all located in the Jenkins Creek sub-basin of the Green River Watershed. *Lake Wilderness* is a 67-acre lake with associated wetlands. It has a mean depth of 21 feet and a maximum depth of 38 feet, and contains trout. The lake drains via open and underground channel into Jenkins Creek. It is used heavily for swimming and fishing in summer, and has public access for boats. Internal combustion engines are not allowed on the lake. Bald Eagles have been sighted using the shoreline⁴, and the lake is managed for trout.

Pipe Lake

Pipe Lake is a 52-acre lake. The lake has a mean depth of 27 feet and a maximum depth of 65 feet, and drains via open channel to Cranmar Creek. It does not have public access, and is currently not managed for any particular species. The lake also contains confirmed Bald Eagle habitat.

Lake Lucerne

Lake Lucerne is a 16-acre lake. Its mean depth is 18 feet, and its maximum depth is 37 feet. The lake drains by pipe into Jenkins Creek. The lake does not have public access, and is currently not managed for any particular species. The lake has confirmed Bald Eagle habitat.⁵

Noxious Weed Eradication Projects

² King County, December, 1990: *Sensitive Areas Map Folio*.

³ Lake depths and acres are from King County Department of Surface Water Management, 1995: *Lakeside Logic: A Guide to Lake Stewardship in King County*, p. 10-11. Other lake information is from the *King County Wetlands Inventory, March, 1991*.

⁴ King County Wetlands Inventory, March, 1991, Jenkins Creek 22.

⁵ King County Wetlands Inventory, March, 1991, Jenkins Creek 21.



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The King County Water and Land Resource Division's Lakes Program, in cooperation with the cities of Covington and Maple Valley, continues its effort to eradicate noxious weeds in area lakes. Noxious weeds spread by vegetative reproduction and grow quickly once they are established, displacing native species and eventually filling what was once open water with dense plant material. This inhibits swimming, boating, and fishing in the affected areas. It is important to control infestation early before the lakes become too costly to restore.

Hydrilla is encroaching upon Lucerne and Pipe lakes. *Hydrilla* is a non-native weed that spreads quickly. It is new enough that preventing its spread has become a high priority.⁶ Another noxious weed, the *Eurasian watermilfoil*, is encroaching upon Lake Wilderness. The Lake Wilderness Integrated Aquatic Plant Management Plan, adopted in May 1997, was developed to target eradication of Eurasian watermilfoil. The Lake Wilderness Management District was formed among adjacent lake-side property owners early in 1998 to ensure funding for cleanup of the lake.

The eradication program consists of scheduled spraying of an aquatic herbicide called *Sonar* (fluridone) directly over the lakes' surfaces on an ongoing basis for a period of nine years. After this period, an herbicide called *Aquathol* will need to be sprayed to keep the aquatic plants under control. *Sonar* does not have any documented health hazards if it is used properly.⁷ Its only limitation is that it cannot be sprayed within ¼ mile of a drinking water intake. Lake area residents are notified of the spraying schedule, and asked not to swim during spraying times. However, there are no swimming hazards associated with *Sonar* treatment, and fish are not significantly affected by the chemical.

Streams

A healthy stream network provides important and beneficial functions, including storing and regulating stormwater flow, purifying surface water, recharging groundwater, conveying water, providing important aquatic habitat and supporting important biological activities. The most effective solution for protecting natural drainage systems is to control the amount and quality of surface water runoff. Increases in water velocity, sedimentation, or contaminants can create serious adverse effects on stream habitats for fish and wildlife.

Most of the streams in the Soos Creek Basin have relatively good water quality. Localized water quality degradation has been observed, such as high fecal coliform levels in some small creeks, and invasive non-native plants and concentrated nutrient levels in lakes. These instances occur mostly due to failing septic systems; agricultural runoff from livestock, pets, and terrestrial animals; or where high levels of urban runoff are not properly treated prior to entering the natural surface water system.

Maple Valley is beginning to see the surface water effects of rapid development. These effects are mainly in the form of increased stormwater runoff, but also include flooding, erosion, sedimentation,

⁶ King County Water and Land Resources Division: "Hydrilla Eradication Project Summary, June 10, 1998."

⁷ City of Maple Valley, Maple Valley Leaves, Issue 2, June, 1998, p. 1.

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destruction of fish habitat, and water quality degradation.⁸ The long term effects of such surface water problems include rising pollutant levels that can pollute domestic water supply wells, especially in areas with coarse gravelly soils.⁹ Under these conditions, the use of streams for water supply recharge, fish habitat and recreation becomes more problematic.

Drainage system problems are caused by many types of development actions including the following:

- Filling or siting development in wetlands.
- Stream channelizations.
- Loss of forested stream corridors.
- Fish passage barriers.
- Dewatering.
- High flows and sediment movement.

The State Department of Natural Resources rates streams from Class 1 (shorelines of the State) to Class 5, based on cold water commercial and game value. Classes 1 through 3 usually have spawning salmon. Classes 4-5 may have spawning salmon. Class 5 streams are small and may be seasonal. In detail:

- Class 1 streams are those inventoried as “Shorelines of the State” under King County’s Shoreline Master Program.
- Class 2 streams are those smaller than Class 1 streams that flow year-round during years of normal rainfall or those that are used by salmonids.
- Class 3 streams are those that are intermittent or ephemeral during years of normal rainfall and are not used by salmonids.
- Unclassified streams are those for which a watercourse has been identified but for which the defining characteristics of a Class 1, 2 or 3 stream have not been determined. Further study is necessary to classify these streams.

Cedar River

The Cedar River is a Class 1 stream flowing northwestward just north of the City limits. This is the largest stream in the Maple Valley area. It is the largest and cleanest source of water for Lake Washington, contributing almost 50 percent of the lake’s total inflow. It provides two-thirds of the City of Seattle’s water supply and is home to significant anadromous fish runs, including endangered Chinook Salmon.¹⁰ The Department of Ecology has designated the length of the Cedar River, from the four-mile point measured from the mouth to the headwaters, with a Class AA water quality rating (extraordinary). This rating prohibits waste discharge into the stream.

Rock Creek is a Class 2 stream with salmonids along the City’s eastern boundary. It flows through *the Rock Creek Natural Area* and drains into the Cedar River. This Natural Area is managed by King County to maintain its pristine qualities.

⁸ King County *Soos Creek Basin Plan* 1990: 1.

⁹ See the discussion on septic tanks, wells and groundwater in the Potable Water section.

¹⁰ King County Surface Water Division: *Lower Cedar River Basin Plan Summary*, March, 1996. p. 9.



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Green River

The Green River is a Class 1 stream located several miles south of Maple Valley, connected to many of Maple Valley's streams through Jenkins Creek. The Green River has some of the best water quality in all of Puget Sound. (It is also rated as Class AA in water quality.) The streams in Maple Valley that drain into the Green River are listed and described below.

Cranmar Creek is a Class 2 stream with salmonids, which flows south out of a partially developed wetland in the Elk Run Golf Course.

Jenkins Creek, North Fork

Jenkins Creek, North Fork is a Class 2 stream with salmonids, which drains Lake Wilderness. It was recently "daylighted" through the King County Surface Water Management Program (i.e., restored from a culvert stream to an open channel).

Jenkins Creek, South Fork

Jenkins Creek, South Fork is a Class 2 stream with salmonids, and is connected to Lake Lucerne via one of the only undeveloped wetlands in Maple Valley. A portion of this creek was also "daylighted" by King County.

Floodplains

Flooding is a natural geologic process that helped to shape Maple Valley. It occurs regularly, leaving some areas particularly unsafe for habitation and development. These *Flood Hazard Areas* are defined by the Federal Emergency Management Agency (FEMA) as those areas subject to inundation by the 100-year flood. A 100-year flood has at least a one percent probability of inundation in any given year. This percentage has measurably increased in recent years due to development rapidly reducing the storage capacity of floodplains and increasing the amount of surface runoff. FEMA has developed a program to assist homeowners in relocating their frequently flooded homes out of the floodplain.

The current city limits do not contain any designated 100-year floodplains. The Cedar River Valley is the nearest 100-year floodplain to Maple Valley. It runs just north of the City from southeast to northwest. During flooding, the river overflows its banks and spreads out over the valley floor. Within the City boundaries, streams, lakes, wetlands and closed depressions all have the potential to form floodplain conditions. These areas can overflow their banks during significant storm events. When they do, they usually drain into nearby wetland soils. These overflows can be managed by strategically protecting, as well as constructing, wetlands which provide flood water reservoirs, storing surplus water as groundwater during wet periods and later discharging this stored water into streams to augment base stream flows.

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Groundwater Recharge Areas

Much of Maple Valley and its surrounding neighbors rely on groundwater for drinking water supply.¹¹ This supply is recharged in areas that have high soil permeability, where rainwater percolates into subsurface saturated zones, or aquifers. In fact, the City of Kent owns two significant tracts of land adjacent to the Maple Valley city limits that it utilizes for well fields. The groundwater recharge areas that are of concern are those “areas highly susceptible to groundwater contamination,” as identified and mapped by multiple jurisdictions including King County, Covington Water District, City of Kent, and the City of Maple Valley.

The major concern with recharge areas is maintaining the appropriate density and type or intensity of development that would not threaten groundwater. Susceptibility to groundwater contamination is based on the combined effect of hydrology (such as water table depth, gradient and soil structure) with the potential for contamination based on above and surrounding land uses. Land uses such as waste disposal sites, industry, and even households are potentially harmful if they have chemicals or toxins on sites that can be spilled or otherwise introduced into the groundwater.

Approximately 50 percent of Maple Valley is underlain by areas highly susceptible to groundwater contamination. Urbanization of recharge areas typically reduces groundwater infiltration, due to conversion of permeable soils with pavement and other impervious surfaces. In the last decade, development in the Cedar River Basin is estimated to have reduced groundwater recharge by five to ten percent.¹² The Green River Basin has seen similar or even greater levels of development.

All industrial areas in Maple Valley are entirely or partially located above a groundwater recharge area. One is located on the northwest corner of SE 260th Street and SR 169, another one is located on the north side of the Cedar River Pipeline road, east of Witte Road, and another small one is located at SE 240th and SR 169. According to the *Covington Water District 1994 Comprehensive Water System Plan*, several existing land use activities could pose a threat to the aquifers within this area.¹³ The City will incorporate these recharge areas into its critical areas regulations.

Wellheads

Wellheads are also points of susceptibility to groundwater contamination. The Covington Water District gets a significant portion of its water supply from two well fields: at Lake Sawyer (just south of SE 288th Street) and at Witte Road (at the intersection with SE 264th Street). The District has adopted wellhead protection programs for these wells that will be incorporated into the City’s development regulations.

¹¹ King County Planning Division: Tahoma Raven Heights Communities Plan, May, 1982, p. 63.

¹² King County Surface Water Division: Lower Cedar River Basin Plan Summary, March, 1996. P. 9.

¹³ Section 1, “Lake Sawyer Wellhead Protection Plan Executive Summary,” *Covington Water District 1994 Comprehensive Water System Plan*, Volume 2, Selected Appendices.



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Planning Issues of the Natural Water System

Over the last century, the Cedar and Green Rivers, and Cranmar and Jenkins Creeks, have been affected by logging and forest removal, coal mining, agricultural activities, and development – without consideration of long-term consequences. These actions have led to denuded slopes, channelized streams, encroachment on floodplains, and decreased water quality. The cumulative effects of these actions are erosion, sedimentation of stream channels, flooding of homes, and the destruction of fish and wildlife habitats. This is especially important in light of the fact that all of the City's streams contain salmonids which may require further protection measures when listed as threatened or endangered species. How Maple Valley treats its waters today also affects its downstream neighbors.

Past mitigation measures have not always been adequate to protect these basins. In addition to mitigation measures and management plans that exist, this Plan will consider other mitigation measures effective in protecting sensitive drainage basins, including, but not limited to: close cooperation between cities and King County involved in basin planning, revision of stormwater standards, strict enforcement of critical areas ordinances and buffer areas, public involvement and education, and land use and zoning protection. This Plan should adopt by reference the highest applicable Surface Water Management standards. Also, some of the streams identified in Maple Valley have been *daylighted* (transforming a culvert stream to an open channel). Daylighting a stream has proven to be a successful way to restore an underground stream's function and value by bringing it back to the surface.

Environmental education programs will also help Maple Valley to reach its environmental preservation goals. Coordination with the Tahoma School District, as well as with utility districts on such programs as water conservation, wellhead protection programs, and other best management plans could prove to be very effective. Many resource protection and education programs are already in place in the region, and available to Maple Valley's government and citizens. King County offers surface water management advice, training, technical assistance and grant sponsorship to help communities monitor and manage lakes. For example, the impacts of surface water runoff and pollution can be reduced by establishing buffers of filtering native plants around lakes' shorelines and along banks of inflowing streams. Plants also prevent shoreline erosion, and improve fish and wildlife habitat. Developing adequate land clearing, grading, buffering and critical areas policies which protect these resources will be a key challenge to the Plan.

A limited number of residents still rely on private wells for their water supply. These wells rely on the surficial groundwater aquifer. As new development occurs adjacent to properties with private wells, measures should be in place to ensure that adverse impacts to existing wells from new development is avoided or mitigated, or those households on private wells are connected to the Cedar River or Covington Water District systems.



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Wellheads that are susceptible to aquifer contamination are of critical importance to protect. The City and the Covington Water District should work cooperatively to implement the State Wellhead Protection Program and the 1986 Federal Safe Drinking Water Act, which generally requires mapping wellhead protection zones and establishing an interagency wellhead protection plan. The City should work with the water districts to maintain proper management zones around public wells, to detect existing ground water contamination sources, and to manage potential sources of groundwater contamination prior to their entry into the drinking water system.

In summary, policies and regulations that protect and promote groundwater recharge, including wellhead protection programs, should be implemented. Since aquifer recharge areas overlap jurisdictional boundaries local cities, water districts and the County must work together to protect these resources.

SOILS AND TOPOGRAPHY

Soils and topography are important sources of information for determining the degree to which an area is susceptible to geologic hazards such as erosion hazard areas, landslide hazard areas, and seismic hazard areas. Steep slopes, coupled with certain soils and drainage characteristics, indicate potential areas of landslides and other geologic instability which can threaten the public health and safety.

Topography

The City lies in gently rolling terrain perched above the Cedar River Valley. Elevation ranges from 400 to 600 feet above sea level. Most of the geologic hazard areas are associated with the bluffs and ravines that run into the Cedar River Valley immediately north and east of the City.

Erosion Hazard Areas

Erosion hazard areas are those areas containing soils which have historically led to severe, or very severe, erosion hazard. Generally, these problems are either the result of historic poor grading and construction practices or are areas characterized by loose unconsolidated soils subject to scouring. Erosion Hazard Areas are present in Maple Valley. These are areas particularly prone to erosion activity located along the Cedar River or adjacent to and southwest of Lake Wilderness. It is recommended that development in these areas be either clustered, kept at low density, or avoided.

Landslide Hazard Areas

Landslide hazard areas are generally those areas subject to a severe risk of landslide, due to the following combination of factors:

1. Any area with a combination of:
 - a) Slopes 15 percent or greater; and



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- b) Impermeable subsurface material (typically silt and clay), frequently interbedded with granular soils (predominantly sand and gravel); and
- c) Presence of springs or seeping ground water during the wet season.
- 2. Steep slopes of 40 percent or greater.
- 3. Any areas located on a landslide feature that has shown movement during the past 10,000 years or which is underlain by mass wastage debris.

Landslide hazard areas are located north of the City boundaries and generally follow the bend of the Cedar River. A portion of the City extends into a landslide hazard area between the Cedar River Pipeline Road and the northern City limit in the area occupied by the gravel mining operation. The mining reclamation plans and future land uses for this area will need to be considered in light of this limitation.

Seismic Hazard Areas

Seismic hazard areas are those areas subject to severe risk of earthquake damage as a result of seismically induced settlement or soil liquefaction. These conditions occur in areas underlain by “cohesionless” soils of low density, usually in association with a shallow groundwater table.

The seismic hazard area in Maple Valley is associated with the Cedar River Valley, and extends into the northeastern portion of the City.

Soils

The geology of Maple Valley is largely the result of prehistoric glacial activity and subsequent ice retreats. The United States Department of Agriculture and the Soil Survey of King County mapped and analyzed the soils in the area. The most common soil type in the area is known as the Alderwood series, which includes moderately well drained, gravelly sandy loams that are 24 to 40 inches deep over consolidated glacial till. The next most common type is the Everett series. Everett soils are gravelly and are underlain by sand and gravel. In certain areas, principally basins and lowlands, organic materials, including peat, occur in depths up to ten feet.¹⁴

Planning Issues of Soil and Topography

The climb to Maple Valley's higher elevations from the Cedar River or Black Diamond brings a person to overlooks within the City which provide excellent views along forested greenbelts. Because of their desirability, these views are highly susceptible to development. However, these areas are also characterized by steep slopes with unstable soil layers prone to liquifaction or slide. According to Maple Valley citizens, these rolling forested greenbelts provide the aesthetic rural quality of life they prefer. If they are developed, Maple Valley could lose the very qualities that the residents hold dear.

¹⁴ Soos Creek Water and Sewer District: 1997 Sewer Comprehensive Plan. p. 2-3.



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Mitigation measures available to prevent the degradation of the valley walls and greenbelts from clearing and development should include, but not necessarily be limited to: ordinances to protect vegetation and critical areas, mapping and protecting critical viewsheds, design standards for steep slopes and revegetation projects, and limitation of development in geologic hazard areas through land-use restrictions.

To be prepared for the hazards associated with severe seismic activity, Maple Valley should continue to update their Emergency Management Plan. This plan should include an earthquake disaster response element that assigns specific responsibilities to City officials in a seismic event, and should define the relationship between Maple Valley and other jurisdictions and their plans, and between Maple Valley and the Federal Emergency Management Agency. This plan should also identify structures in the City, which are particularly hazardous in these situations.

PLANTS AND ANIMALS

Maple Valley is known for its abundance of trees and freshwater lakes. Lake Wilderness, Pipe Lake, and Lake Lucerne provide habitat for a variety of plant and animal species. Wildlife habitats are very important to the community and the future of wildlife in the area. They are located throughout the community as pockets of open space, forested greenbelts, lakes, wetlands, trails, and stream corridors.

These features may be protected through a number of techniques ranging from site-specific land use restrictions, critical area regulations, Native Growth Protection Easements, or one of the many public open space protection programs such as King County's Public Benefit Rating System (PBRs).

Plant Life

Dense third-growth stands of Vine maple, Douglas fir, and Western hemlock are the most common plant community in Maple Valley. Much of the natural vegetation in Maple Valley consists of plant species associated with these lowland coniferous forests, including shrubs, herbs, and sedges. Meadows and wetland species are also common in Maple Valley.

Fish and Wildlife

Of the many species of fish and wildlife living in Maple valley, salmon are perhaps the most fragile and endangered. Both the Cedar and Green Rivers, and their tributaries, contain Chinook, Coho, and Sockeye Salmon. The National Marine Fisheries Service has listed several of these species as threatened or endangered under the Endangered Species Act. Lake Wilderness is managed for trout. Large and small mouth bass are also found in Lake Lucerne and Pipe Lake.

Considering that Maple Valley comprises the easternmost point of King County's urban growth boundary, it is not surprising that large mammals are commonly seen. Black bear have been sighted



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recently near Lake Lucerne, and cougars live north and east of the City in the higher elevations. Deer and elk also frequent the City.

The designation of wildlife corridors is a successful way to manage and preserve wildlife. Maintaining these areas in their natural state reduces the threat of human intrusion. These animals usually only enter urban areas when their habitats are displaced by urban development. One wildlife corridor is located inside the eastern boundary of the Belmont Woods development between S.E. 244th and S.E. 248th Streets. This area, near the Rock Creek Natural Area, contains valuable wildlife habitat. (See Figure CF.1 in the Capital Facilities element.)¹⁵ Another much larger wildlife corridor, designated in the 1994 King County Comprehensive Plan, runs in a northeast to southwest direction immediately southeast of the Maple Valley city limits.

Small fur animals typically found in Maple Valley include opossum, skunk, and cottontail rabbit. Along waterways, it is not uncommon to find beaver, river otter, raccoon, and muskrat.

Common bird species include passerines, or perching birds, woodpeckers, waterfowl, and raptors. These birds may be either year-round residents or present during specific breeding, nesting, or migratory seasons. Typical passerine species would include sparrows, finches, grosbeaks and warblers, among others. Cavity nesting birds such as woodpeckers, tree swallows and nuthatches are typically present in the remaining forested tracts of land. Waterfowl include wood duck, common coot, Canada goose, mallard and mergansers. Other water- and wetland-dependent species include great blue heron, marsh hawk, and red-winged blackbird. The most common types of raptors include red-tailed hawk, osprey, bald eagle, and great horned owl.

Planning Issues of Plant and Animal Management

Maple Valley's natural environment warrants close consideration as the City continues to urbanize. Critical area regulations will be particularly important in protecting the functions of environmentally sensitive areas in the future. All of the City's critical areas, whether mapped in this element or determined in the future on a site-specific basis, should have their environmental functions protected from urban development, and adverse impacts mitigated.

Development pressures indicate that only strict mitigation measures will slow the degradation of plant and animal habitat. These mitigation measures should include, but not necessarily be limited to: residential and commercial design standards, vegetative protection requirements, land use and zoning restrictions, critical area regulations, incentives for open space and stream corridor preservation and revegetation projects, and public education and involvement programs.

Ground-disturbing projects require consultation with the City in order to reduce the cumulative impacts on natural resources. For example, the City of Maple Valley Zoning Code regulates clearing and grading along the edges of lakes or streams, within wetlands, or inside the buffer zones of these and other sensitive areas. Typically, buffers extend 25 to 100 feet from the outer edge of a sensitive

¹⁵ King County Assessor's Section Map.

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area. Approved permits are required for activities within these areas. Depending on the nature of the project, additional coordination may be required such as the Shoreline Management Master Program or clearing and grading permits.

Public and private land owners can achieve their common goal of open space, wildlife habitat and critical area preservation if they develop their plans together to provide continuous corridors and necessary links in the open space system. Where these reserves are located on private lands, incentives should be considered to protect highly valued forest tracts remaining in the City. King County offers an incentive to preserve open space on private property by providing a tax reduction if the land contains one or more open space resources. This tax incentive establishes a “current use taxation” property tax assessment for the approved open space land. This taxation is lower than “the highest and best use” tax assessment level that usually applies on most land. The reduction in taxable value ranges from 50 percent to 90 percent for the portion of the property in “current use.”¹⁶ There are other widely accepted financial incentives for preserving open spaces, streams and wildlife areas such as the Community Stewardship Grants which can be obtained from King County’s Water and Land Resources Division.¹⁷

¹⁶ The King County Current Use Taxation Program. Application can be obtained from the King County Department of Natural Resources.

¹⁷ The King County Current Use Taxation Program. Application can be obtained from the King County Department of Natural Resources.



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Goals & Policies

GOALS & POLICIES

The goals and policies in this section provide the basis for Maple Valley to protect critical areas and natural features. In the past several decades, the quality of the natural environment has become an increasingly important consideration in developing Comprehensive Plans. The constraints of the landscape to development, and the environmental impacts associated with proposed development, should be evaluated before land is allocated to specific uses. This allows more detailed information to be gathered and analyzed at the building construction or permit application stages, thus more effectively determining the compatibility of the proposed use with the natural environment, the probable environmental impacts, and measures that can be employed to mitigate or reduce such impacts.

The most effective way to plan for a healthy environment in Maple Valley is to coordinate the planning of its interrelated components. Planning for the provision of one feature will likely improve the provision of another. For example, increasing the amount of vegetation in the community improves air quality. And improving air quality will encourage people to enjoy the parks and greenbelts, which they created.

Open Space

The main goal for open space planning is to create a Comprehensive Plan which links open space features of many kinds. These could wind through and between neighborhoods and commercial areas to link trails, habitat conservation areas, native growth protection easements, and vegetative buffers. (See the Capital Facilities element for a complete discussion of parks, trails and open space.)

Air Quality

Air quality is a growing problem in the Northwest. The automobile is the number one contributor of air pollution, and Maple Valley is a growing automobile-dependent community. Other sources of air pollution are wood-burning stoves, and certain commercial and industrial operations. The City should engage in efforts to reduce auto dependency by providing pedestrian trails, efficient public transportation, and education about carpools and trip efficiency.



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Goals & Policies

GOALS

- EQ-G1** Protect and enhance Maple Valley's natural environment, including air quality, water resources, natural features that contribute to the City's scenic beauty, and critical areas as defined by the GMA.
- EQ-G2** Manage the natural and built environments to protect, enhance, and sustain environmental quality, while minimizing public and private costs.
- EQ-G3** Promote community-wide stewardship of the natural environment to preserve environmental quality for future generations.
- EQ-G4** Preserve significant areas of native vegetation along major roadways.

POLICIES

CRITICAL AREAS

- EQ-P1** The City of Maple Valley should designate and protect the critical areas as mapped and adopted in the Maple Valley Comprehensive Plan, as well as coordinate with King County and adjacent cities for the long term preservation of surrounding natural areas, such as the Rock Creek Natural Area. Public access to critical areas for scientific, educational, and recreational use is desirable provided the public access trails are carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.
- EQ-P2** The City designates the following environmental features as “critical areas” in accordance with the State Growth Management Act:
 - a. Wetlands
 - b. Fish and wildlife habitat conservation areas, including lakes and streams
 - c. Areas with a critical recharging effect on groundwater used for water supply
 - d. Frequently flooded areas
 - e. Geologically hazardous areas, including erosion hazard areas, landslide hazard areas, and seismic hazard areas, (and coal mine hazard areas)

INCENTIVES, EDUCATION, PLANNING AND REGULATIONS

- EQ-P3** In addition to its regulatory authority, the City of Maple Valley should use incentives to protect or enhance the natural environment whenever practicable. Incentives may include buffer averaging, density bonuses, lower tax assessment for land preserved in open space (King County Public Benefit Rating System), and appropriate non-regulatory measures.



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Incentives should be monitored to determine their effectiveness.

- EQ-P4** The City of Maple Valley should promote environmental stewardship by educating its citizens and establishing partnerships with other entities (e.g., the Tahoma School District) that share similar environmental concerns or stewardship opportunities.
- EQ-P5** The City of Maple Valley should coordinate with its citizens and with other jurisdictions (federal, tribal, State, and local) in protecting and enhancing the natural environment.
- EQ-P6** City of Maple Valley should use acquisition, enhancement, incentive programs, and appropriate regulations to preserve critical areas as permanent open space where development may pose hazards to health, property, important ecological functions, or environmental quality.
- EQ-P7** Best available science should be included in the development of critical areas protection regulations to ensure the protection of critical areas functions and values.

AIR QUALITY

- EQ-P8** The City of Maple Valley should reduce air pollution associated with land uses by:
 - a. Requiring measures to minimize particulate emissions associated with land clearing and construction activities.
 - b. Promoting the use of clean-burning fuels
 - c. Educating people in the health risks and environmental effects of air pollutants, and what each person can do to improve air quality.
 - d. Encouraging the proper use of wood stoves and fireplaces.
 - e. Promoting land use patterns and public facility sitings that reduce the quantity and length of single-occupancy vehicle trips.

WATER RESOURCES

General Water Resources

- EQ-P9** The City of Maple Valley should coordinate the management of its surface water with other agencies who provide or impact the City's drinking water and wastewater treatment. This should include playing a responsible role in the Countywide effort to protect and enhance surface waters on a watershed basis by working with the State Department of Fish and Wildlife to analyze water quality and quantity problems and their impacts on fish and wildlife habitat, as well as to control stormwater runoff problems in the Soos Creek and Cedar River watersheds.
- EQ-P10** The City will seek to work cooperatively with King County Surface Water Management Division, the Washington Department of Ecology, and other affected jurisdictions and tribes to implement water quality management strategies and to comply with *Municipal*

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National Pollutant Discharge Elimination System regulations to address non-point pollution.

EQ-P11 The City of Maple Valley should use incentives, regulations, and programs to manage its water resources (groundwater, streams, lakes, and wetlands) and to protect and enhance their multiple beneficial uses, including flood and erosion hazard reduction, aesthetics, recreation, water supply, gardening, and fish and wildlife habitat. Use of water resources for one purpose should, to the fullest extent practicable, preserve opportunities for other uses.

EQ-P12 Development should occur in a manner that maintains the ecological and hydrologic function of water resources based on pre-development quality and quantity measurements. This includes avoiding negative adverse impacts on water quality or water quantity. Surface water management facilities that use natural streams and lakes for storage should ensure that those natural features are not adversely impacted by their inclusion in the surface water system.

In addition to mitigation and management plans that exist, Maple Valley will consider other mitigation measures that are effective in protecting sensitive drainage basins including, but not limited to: close cooperation between cities and King County, revision of stormwater standards, strict enforcement of critical areas ordinances and buffer areas, public involvement and education, and land use and zoning protection.

EQ-P13 The City of Maple Valley should actively promote conservation of water resources. To the maximum extent practicable, water conservation measures (e.g., low-flow shower heads, lawn watering schedules) should be incorporated in new development, including City parks and other civic projects.

EQ-P14 The City should continue to restrict stream relocation projects, the placing of streams in culverts, and the crossing of streams for both public and private projects. Where applicable in stream corridors, the City should give consideration to structures that are designed to promote fish migration and the propagation of wildlife habitat.

EQ-P15 Erosion control measures should be used for grading and any work in or adjacent to stream or lake buffers.

EQ-P16 Appropriate mitigation for detrimental impacts may be required for construction work within the buffer area associated with a stream channel or a lake. Furthermore, the City and project developer or water purveyor should work in cooperation with the Department of Fish and Wildlife through the Hydraulic Project Approval permit process for all development proposals which involve streams.

EQ-P17 Essential public facilities and utilities may cross lakes where no other feasible alternatives exist. The amount of intrusion should be the minimum necessary to complete the project.

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- EQ-P18** The City of Maple Valley should take into account the potential impacts of its land use actions on aquifers that serve as potable water supplies. The depletion or degradation of aquifers needed for potable water supply should be avoided. Otherwise, if the *potential* for aquifer contamination is identified, a detailed mitigation plan should be developed and implemented to compensate for the potential lost supply. Water contamination potential will be determined through coordination with King County's Water and Land Resources Divisions' clean water program.
- EQ-P19** The City of Maple Valley should protect groundwater recharge quantity by promoting methods that infiltrate runoff where site conditions permit, except where potential groundwater contamination cannot be prevented by pollution source controls and stormwater pretreatment.

Streams

- EQ-P20** Stream channels should be protected and restored, where possible for their hydraulic and ecological functions, as well as their aesthetic value. Stream channels should not be diverted through culverts or undergrounded for excessive distances unless absolutely necessary for property or utility access and where no other alternative can be reasonably implemented. Where culverts are used, the installation and type of culvert should allow passage by, and not be injurious to, migratory fish.
- EQ-P21** When development or redevelopment is proposed on property that contains streams that have been degraded, contained in culverts, channelized or undergrounded, streams should be restored, daylighted and/or natural functions improved to the maximum extent possible.
- EQ-P22** The City of Maple Valley, in partnership with King County and other jurisdictions, should promote restoration of stream channels and associated riparian areas to enhance water quality and fish and wildlife habitat and to mitigate flooding and erosion. The City should encourage such restoration as a condition of development adjacent to streams.
- EQ-P23** The City of Maple Valley should require vegetative buffers of developments to protect the ecological functions and habitat associated with streams. Greater protection should be provided to streams that are used by salmon during any part of their life-cycle. Native vegetation should be protected or planted wherever possible.

Lakes

- EQ-P24** The City of Maple Valley should protect Lake Wilderness, Pipe Lake, and Lake Lucerne through management of their watersheds and shorelines, including management of nutrients that stimulate algae growth and aquatic plant growth. The City should work with King County, the Lake Wilderness Management District, adjacent jurisdictions, special

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purpose districts, and other interested citizens in the preparation of management plans for the lakes, including the existing noxious weed eradication projects.

EQ-P25 The City of Maple Valley should utilize its Shoreline Master Program as one implementation measure for the protection of the City's lakes.

EQ-26 Lakes should be protected and enhanced by proper management of watersheds and shorelines, by improvements in water quality, by removal of invasive plant species, and by restoration of fish and wildlife habitat.

Wetlands

EQ-P27 The City of Maple Valley should work with King County, the State, and other jurisdictions, tribes and citizen groups to utilize the most current and appropriate Countywide wetlands policies and classification system. Standards for delineating wetlands should use scientifically accepted technical criteria and field indicators which meet, at minimum, the most current *Washington State Wetlands Identification and Delineation Manual*.

EQ-P28 The City of Maple Valley's overall goal for the protection of wetlands is, by requirement, *no net loss of wetland functions or values within each drainage basin*. **Wetland functions** are natural processes performed by wetlands. Wetlands promote food chain production, provide fish and wildlife habitat, maintain and improve water quality, retain water for recharge and discharge into groundwater aquifers, moderate surface water and storm water flows. Other functions include, but are not limited to those discussed in U.S. Army Corps of Engineers regulations (33 CFR 320.4(b)(2), 1988). **Wetland values** are estimates, usually subjective, of the benefits of wetlands to society, and include aesthetics, education, scientific research, and recreation.

EQ-P29 Acquisition, enhancement, and incentive programs should be used independently or in combination to designate wetlands as permanent open space, and to protect and to enhance wetland functions.

EQ-P30 Development adjacent to wetlands should be sited such that wetland functions are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented or mitigated.

EQ-P31 Alterations to wetlands should be allowed to:

- a. Accomplish a public agency or utility development, utilizing the necessary mitigation measures as detailed in the agency's or utility's approved Best Management Practices Plan
- b. Provide necessary utility and road crossings, utilizing the necessary mitigation measures as detailed in the agency's or utility's approved Best Management Practices Plan
- c. Avoid denial of reasonable use of the property, provided that all wetland functions are evaluated, the least harmful reasonable alternatives are pursued, and affected

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significant functions are appropriately mitigated

- d. Otherwise modify property for development only in compliance with the City's wetland regulations and policies

- EQ-P32** Public access to wetlands for scientific, educational, and recreational use is desirable, provided the public access trails are carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.
- EQ-P33** Wherever possible, areas of native vegetation that connect wetland systems should be protected, preferably through incentives and appropriate non-regulatory mechanisms.
- EQ-P34** Mitigation proposals for wetland functions lost due to development should replace or enhance the lost functions. The goal for these mitigation projects should be no net loss of wetland functions per drainage basin. Mitigation sites should be located strategically to alleviate habitat fragmentation.
- EQ-P35** Mitigation projects should contribute to an existing wetland system or restore an area that was historically a wetland. Where restoration or enhancement of an existing degraded wetland system is proposed, it must result in a net improvement to the functions of the wetland system.
- EQ-P36** The City of Maple Valley should provide flexibility in its wetland mitigation requirements to allow for protection of systems or corridors of connected wetlands. A tradeoff of small, isolated wetlands in exchange for a larger connected wetland system can achieve greater resource protection and reduce isolation and fragmentation of wetland habitat.
- EQ-P37** Developers of projects for which wetland mitigation is required should provide monitoring and maintenance until the success of the site is established. Land used for wetland mitigation should be preserved in perpetuity. If conditions change such that wetlands can no longer be maintained on the land, it should be preserved as open space.

Floodplains

- EQ-P38** Any floodplain land use and floodplain management activities should be carried out in accordance with the *King County Flood Hazard Reduction Plan* or its successor.

VEGETATION

- EQ-P39** Lakes should be protected and enhanced by proper management of watersheds and shorelines, by improvements in water quality, by removal of invasive plant species, and by restoration of fish and wildlife habitat.
- EQ-P40** The use of native plants should be required in landscaping and erosion control projects, and in the restoration of stream banks, lakes, shorelines, and wetlands.
- EQ-P41** The City of Maple Valley should adopt vegetation protection standards to implement its goals of preserving native plant species, forested greenbelts, and maintaining a healthy

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environment. This approach would outline guidelines and standards to follow for the retention of trees, the preservation of forested lots, and incentives for implementation, especially along major roadways.

FISH AND WILDLIFE HABITAT

- EQ-P42** The City of Maple Valley should strive to maintain habitats that support the greatest diversity of fish and wildlife species consistent with the City's land use objectives. Fish and wildlife habitat should be maintained through conservation and enhancement of terrestrial, air, and aquatic habitats, preferably in open spaces and sensitive areas.
- EQ-P43** Habitats for species which have been identified as endangered, threatened, or sensitive by the State or federal government should not be reduced and should be preserved. When development is proposed that is adjacent to or likely to adversely impact habitat, the proponent should be required to assess the impacts of the proposal on the habitat and provide measures necessary to minimize or avoid any adverse impacts on these areas. Stream and wetland buffer requirements may be widened to protect such habitats, as appropriate. Whenever possible, density transfers, and/or buffer averaging should be allowed.
- EQ-P44** Salmonid habitats located in regulated shoreline areas should be protected in accordance with the Maple Valley Shoreline Master Program.
- EQ-P45** The City of Maple Valley should be a good steward of public lands, and should incorporate fish and wildlife habitats into capital improvement projects whenever feasible.

GEOLOGIC HAZARD AREAS**Steep Slopes, Erosion and Landslide Hazard Areas**

- EQ-P46** Land uses and development on or near steep slopes should be designed to prevent property damage and environmental degradation, and to enhance open space and wildlife habitat consistent with adopted zoning and building regulations. In general, as slope increases, development intensity, site coverage, and vegetation removal should decrease and thereby minimize drainage problems, soil erosion, siltation, and landslides. Slopes of 40 percent or more should be retained in a natural state, free of structures, and other land surface modifications.
- EQ-P47** Grading and construction activities should incorporate erosion control Best Management Practices and other development controls as necessary to reduce sediment discharge from construction sites to minimal levels. Development controls should include seasonal restrictions on clearing and grading.
- EQ-P48** Land uses permitted in Erosion and Landslide Hazard Areas should minimize soil



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disturbance and maximize retention and replacement of native vegetative cover.

- EQ-P49** Landslide Hazard Areas and areas with slopes of 40 percent or greater should not be developed unless the risks and adverse impacts associated with such development can be reduced to a negligible level.

Seismic Hazard Areas

- EQ-P50** In areas with severe seismic hazards, special building design and construction measures should be used to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.



Element 7
CAPITAL FACILITIES

**CAPITAL FACILITIES ELEMENT
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CAPITAL FACILITIES

Support Analysis

BACKGROUND AND CONTEXT

Maple Valley capital facilities addressed in this section fall into two categories:

1. City managed facilities.
2. Non-City managed facilities.

City managed facilities include those that are owned and operated, or managed by the City. Non-City managed facilities as those public capital facilities that are not owned and operated by the City, are facilities and services for which the City has an interlocal or franchise agreement, or services and facilities that are provided to City residents through independent special purpose districts.

This element provides an inventory of both City managed facilities and services, including surface water, transportation, park, recreation, cultural resources and human services, police and the emergency operations center, and non-City managed facilities including fire, public schools, water, wastewater, and solid waste. Transportation, park, recreation, cultural resources, and human services are addressed in their respective elements of this Comprehensive Plan. Other utility facilities such as electrical, natural gas, solid waste, and telecommunication services are discussed in the Utilities Element Support Analysis section of the Plan.

The Growth Management Act (GMA) requires that the Capital Facilities Element provide an inventory of public facilities, including their locations and capacities. The GMA also requires a forecast of future needs for capital facilities, and identification of the proposed location and capacities of new or expanded capital facilities.

For facilities funded by the City, the GMA requires the preparation of a six-year plan for financing new or expanded capital facilities. The six-year plan must consider financing within project funding capacities, clearly identify the sources of public moneys for these improvements, and ensure that these improvements are consistent with the Land Use Element. Finally, the GMA requires the City to reassess the Land Use Element or revise the adopted level of service if funding falls short of meeting future capital facility needs. The King County Countywide Planning Policies further state that capital facility investment decisions place a high priority on public health and safety.

Many public facilities will need to be replaced, and new facilities constructed, in order to meet the needs of existing and new residents. However, it should be noted that these capital facility projects will be competing for limited funding resources. For projects that the City controls, citizens will need to prioritize which projects proceed and how to fund them.

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LEVELS OF SERVICE (LOS)

Levels of service (LOS) are generally quantifiable measures of the amount of public facilities that are provided to the community. Levels of service also may measure the quality of some public facilities. Typically, measures of LOS are expressed as ratios of facility capacity to demand.

The GMA prohibits jurisdictions from approving a development that would cause the level of service to fall below the minimum standards adopted for a specific capital facility, unless improvements or strategies to accommodate the impacts are made concurrent with development. The Act further defines “*concurrent with development*” to mean that the required improvements or strategies are in place at the time of development, or a financial commitment is in place to complete the improvements or strategy within six years.

This Comprehensive Plan identifies the LOS standards for the growth-demand related facilities as required by the GMA. The element also includes general recommendations as to levels of service or other measures for other capital facilities. In most cases, this element identifies future functional plans to be developed to guide development of specific public facilities and services. The City anticipates that those functional plans will be adopted by reference in this Comprehensive Plan when they are completed and may provide for revised level of service standards and projected future needs for these facilities and services, as applicable.

Financing

The “concurrency” requirement of the GMA is a critical component of the legislation. Simply put, the term means that the City must demonstrate in its Comprehensive Plan that it (or other applicable service providers) has the financial capability to construct adequate facilities at the time they are required to support growth anticipated by the Land Use element. Achieving this “concurrency” at the Comprehensive Plan stage does not mean that the cost and timing of each and every capital project need be identified in advance, but rather, that general comparisons of anticipated capital improvements be made against reasonably expected revenue sources to ensure there is a balance. New financing mechanisms that may be required to finance future capital improvements should be identified in the Comprehensive Plan although they might be instituted only when and if the financial need arises.

This Capital Facilities Element is not a budget nor does it serve to replace the City’s annual budget documentation and adoption process. Rather it serves to provide an overview of the needs and financing means to implement or construct large scale and long-term capital improvement projects over the course of the planning horizon. The actual selection, cost and financing decisions regarding individual capital improvement projects are made by the City Council during the annual budget adoption process.

However, the GMA requires the City to monitor whether this “*plan-level concurrency*” is being maintained by continuously reassessing its long range needs and expected revenues. This is achieved through the annual budgeting process, where the City’s six-year Capital Improvement Program (CIP)



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is annually reviewed, updated, and another year's forecast of projects and revenues is added to the CIP. Should expected revenues and capital improvement needs fall out of balance, the GMA requires that the City either acquire additional revenues for the needed capital improvements, lower the level of service standards for the needed facilities, or reassess the Future Land Use Map to either permanently or temporarily reduce the amount of growth and subsequent demand for the facilities in question. The City's six-year CIPs and potential revenue sources are presented in the Appendices. This element also identifies the other public and quasi-public agencies and organizations that provide capital facilities and public services to residents of the City. The City is required to ensure that the future land use and population growth targets adopted in this Comprehensive Plan are consistent with the planned capacities and capabilities of these public facility and service providers over the course of the planning period. References to the level of service standards, existing facilities and revenue sources, and capital facilities plans for these organizations are provided, where applicable. However, the City has no direct authority over these entities and cannot provide a detailed financing plan for their future capital facilities. Nevertheless, for consistency purposes, these facilities and services are addressed in this element, or in the case of water and sewer facilities, in the Utilities Element.

City Facilities and Services

The location of City's facilities and properties are identified on Figure 7.1 and include the following:



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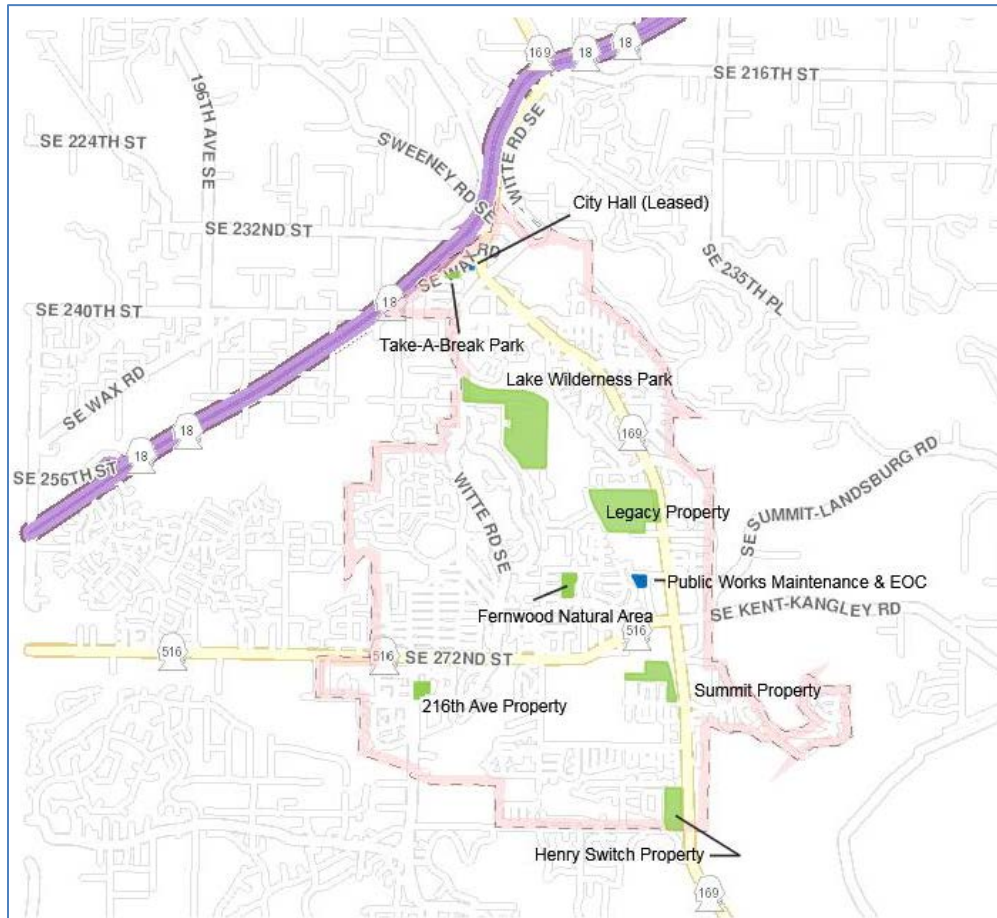


Figure 7.1 - City Facilities & Property

City Hall

City Hall is currently located at 22017 SE Wax Road, Suite 200. The City currently leases approximately 10,377 square feet. It provides office and meeting space for City departments including the City Clerk, City Manager, Finance, Community Development, Public Works, and the Police Departments.

Needs and Plans

While the City has identified the construction of a City Hall as an important goal, the planning effort has not been initiated. In preparation of this effort, a projection of future City employee staffing needs will be completed first. It is envisioned that the new city hall be constructed on the City's 50-acre Legacy property.

Financing

The funding sources for a City Hall have not been identified in the City's capital and operating budgets. However, funding for preliminary planning is included in the six-year Capital Improvement



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Program. The funding sources for the eventual construction of buildings will be determined in the future.

Public Works Maintenance Facility & EOC

The Public Works Maintenance Facility is located at 23713 SE 264th Street. This facility comprises 2.8 acres and includes a 5,000 square foot pre-fabricated steel building and miscellaneous out buildings. Also located at the maintenance facility is a 1,400 square foot modular building that houses the City's Emergency Operation Center (EOC).

Needs and Plans

This facility was purchased in 2011 and renovated in 2012. There are no plans to expand or upgrade this facility. Maintaining the functionality and response capability of the Emergency Operations Center is required.

Financing

Upgrades to the EOC are annually budgeted by the City. Sources of funding include the City's general fund and federal and state grants, including Emergency Management Program Grants.

Transportation Facilities

The Transportation Element of this Plan provides a detailed discussion of the transportation facilities in Maple Valley. In addition, non-motorized facilities are discussed in the City of Maple Valley Non-motorized Plan, adopted in March 2013.

As required by State statute, RCW 35.77.010, the City annually prepares and adopts a six-year Transportation Improvement Plan (TIP). The TIP lists street and non-motorized projects, and can include both funded and unfunded projects. It is prepared for transportation project scheduling, prioritization, and grant eligibility purposes. The City's 2016 – 2021 TIP is provided in Appendix A.

Parks & Recreation Facilities

In February 2014, the City adopted the Parks, Recreation, Cultural, and Human Services Plan. Discussed in greater detail in the Parks Element, this plan provides is a six-year guide and strategic plan for managing and enhancing parks, recreation, and cultural services in Maple Valley. It establishes a path forward for providing high quality, community-driven parks, trails, greenspaces and recreational opportunities. The Plan provides a vision for the City's parks and recreation system, proposes updates to City service standards for parks and facility classifications and addresses departmental goals, objectives, and other management considerations toward the continuation of high-quality recreation opportunities to benefit residents of Maple Valley.

Needs and Plans

The City of Maple Valley is forecasted to grow to approximately 26,700 residents over the next ten years. Serving existing and future residents will require improvements to existing parks and expansion of the park, trail, and recreation system. The six-year Capital Facilities Plan proposes



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approximately \$15.6 million of investment in acquisition, development, and renovation of the parks system over the next six years and identifies additional investment priorities for the future.

Park Type	Acquisition	Development	Renovation	Sum
Park	\$ 3,540,000	\$ 10,975,000	\$ 970,000	15,485,000
Greenway			\$ 29,000	29,000
Trail		\$ 60,000		60,000
Special Facility		\$ 60,000		60,000
TOTAL	\$ 3,540,000	\$ 11,095,000	\$ 999,000	15,634,000

Figure 7.2 - Capital Facilities Plan Summary by Classification & Type

To ensure existing parks provide desired recreational amenities and opportunities, the Plan includes investments in the development and improvement of neighborhood and community parks. For example, development of Summit Park will greatly expand park access and resources for the community as a whole. At Lake Wilderness Park, major improvements, such as dock replacement, swim beach enhancements, and beach house re-modeling, will prepare this popular park for enjoyment for decades to come. The Plan also proposes smaller improvements throughout the park system to enhance accessibility, safety, and usability of park features. The Plan includes a significant land acquisition program to ensure sufficient land for outdoor recreation as City population grows. It identifies target acquisition areas to secure community parkland and fill gaps in neighborhood park access. The detailed Six-Year Capital Facilities Plan (2014 – 2019) is provided in Appendix A.

Financing

A number of strategies exist to improve parks and recreation service delivery in Maple Valley; however, clear decisions must be made in an environment of competing interests and limited resources. The implementation measures identified below look primarily to non-General Fund options. Additionally, a review of likely funding options is attached as Appendix A and includes local financing, federal and state grant and conservation programs, acquisition methods, and others:

- Park Impact Fees (PIF) are imposed on new development to meet the increased demand for parks resulting from the new growth.
- Local funding options including:
 - Voted capital bonds.
 - Levy or levy lid lift.
- Grants, including competitive state and federal grant programs.

Stormwater Management Facilities

The City of Maple Valley has developed and implemented a Stormwater Management Program (SWMP) to improve the quality of life for Maple Valley residents, businesses, visitors, and neighboring communities. The following outlines individual components and brief summaries, which were developed to comply with National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Storm Water Permit issued by the Washington State Department of Ecology under the



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Federal Clean Water Act. The current NPDES Phase II permit issued on August 1, 2013, was modified on January 16, 2015 and will expire on July 31, 2018.

Public Education and Outreach

The City has established an education and outreach program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities.

Public Involvement and Participation

The City provides ongoing opportunities for public involvement and participation through advisory councils, public hearings, or other similar activities.

Illicit Discharge Detection and Elimination

The City has established an ongoing program designed to prevent, detect, characterize, trace, and eliminate illicit connections and discharges into the City's stormwater system.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

The City has established an ongoing program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities.

Municipal Operations and Maintenance

The City has established an ongoing operation and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

Stormwater Conveyance System

The stormwater system in Maple Valley comprises catch basins, manholes, pipes, ditches, infiltration tanks, detention/retention vaults, and detention/retention ponds. This system follows the gravitational flow of the natural drainage basins for the conveyance of stormwater. The southern portion of the City of Maple Valley is located in the Soos Creek Basin. It drains in a southwesterly direction into tributaries of Soos Creek, which originates in the northeast corner of the glacial molded upland known as the Covington Drift Plain, and then joins the Green River east of Auburn. The northern portion of Maple Valley (which is the area located between SR 169 and the Cedar River) drains into the Cedar River.

The City has adopted the 2009 King County Surface Water Design Manual as the design standard for stormwater facilities. Additional criteria are developed consistent with surface water and sensitive areas considerations as part of the policy development of the Comprehensive Plan. The design criteria govern the following aspects of the stormwater system:

- Discharge rates of water for developed and undeveloped areas.
- Water quality.
- Conveyance of the 100-year storm event.
- Size of detention facilities.



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- Duration of stormwater runoff.

City-owned stormwater facilities include the following:

- 118 Detention/Retention Ponds.
- 28 Detention/Retention Vaults.
- 16 Infiltration Tanks.
- Approximately 67 miles of closed conduit pipe.
- Approximately 12 miles of Open Channels (ditches and swales).
- Approximately 4,400 Catch Basins.

Privately-owned stormwater facilities include the following:

- 20 Detention/Retention Ponds.
- 10 Detention/Retention Vault.
- 15 Infiltration Tanks.
- 10 miles of Open Channels (ditches and swales).
- Approximately 800 Catch Basins.

Needs and Plans

The City continues to resolve chronic stormwater problems including areas where there is ongoing recurrent flooding. The City has an ongoing program to inventory of the City's stormwater facilities, conditions, and ratings. In addition, the City will continue to maintain a comprehensive SWMP that addresses facility maintenance, water quality enhancements, and capital improvement projects. The ultimate goal of the SWMP is to reduce erosion and improve water quality.

The City of Maple Valley like any other local municipalities in the state of Washington is required by its current NPDES Phase II permit to integrate Low Impact Development (LID) into existing codes, rules, and standards. Due to the fact that the full implementation of LID requires both stormwater and land use code approval, it is important to ensure that existing codes such as landscaping, parking, or building codes, do not preclude or create a barrier to the use of LID. To ensure that the City meets these requirements, a systematic review and modification of policies, regulation, and implementation is required by no later than December 31, 2016.

The primary objectives for the implementation and use of LID are as follows:

- Provide water quality benefit. The implementation of LID techniques and best management practices (BMPs) can remove some of the pollutants commonly found in urban runoff.
- Preserve wildlife habitat and prevent erosion that can result in detrimental effects to aquatic systems.
- Match pre-development forested hydrologic conditions over a range of rainfall intensities and durations by infiltrating and dispersing stormwater runoff.



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LID site design objectives are grouped into four basic elements as follows:

1. Conservation Measures
 - Maximize retention of native forest cover and restore disturbed vegetation to intercept, evaporate, and transpire precipitation.
 - Preserve permeable, native soil and enhance disturbed soils to store and infiltrate storm flows.
 - Retain and incorporate topographic site features that slow, store, and infiltrate stormwater Retain and incorporate natural drainage features and patterns.
2. Site Planning and Minimization Techniques
 - Utilize a multidisciplinary approach that includes engineers, planners, landscape architects, and architects at the initial phases of a project.
 - Locate buildings away from critical areas and soils that provide effective infiltration.
 - Minimize total impervious surface area and eliminate effective impervious areas.
3. Distributed and Integrated Management Practices
 - Manage stormwater as close to its origins possible by using small scale, distributed hydrologic controls.
 - Increase reliability of the stormwater system by providing multiple or redundant LID flow control practices.
 - Integrate stormwater controls into the development design and utilize the controls as amenities.
 - Reduce the reliance on traditional conveyance and pond technologies.
4. Maintenance and Education
 - Establish a long-term maintenance program with clear and enforceable guidelines.
 - Educate homeowners and landscaping management personnel on the LID maintenance.

Reduced Environmental Impacts and Potential Cost Savings

By managing stormwater in small-scale, distributed facilities, flooding to downstream properties from storm events is minimized. Other benefits include:

- Potential Cost Savings. The LID approach often results in infrastructure cost savings when compared with traditional catch basin, pipe, and pond strategies.
- Bio-retention, one of the primary LID BMPs, is an enhanced stormwater treatment method which provides dissolved metals treatment. Bio-retention facilities also provide flow control, additional landscaping, and habitat.
- The use of the LID approach helps meet the Federal Emergency Management Agency Biological Opinion (FEMA's BIOp) requirements and objectives.



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Financing

The major funding sources for the SWMP and stormwater improvement projects come from grants from the Washington Department of Ecology and the surface water management (SWM) fee. SWM fees are collected from property owners by the County and remanded to the City. Overall, SWM fees are used to pay for facility inspections, inventory of facilities, maintenance, and design and construction costs of stormwater improvement projects. SWM fees are typically used to:

- Replace, upgrade, and maintain existing stormwater system pipes, catch basins, ponds, vaults, tanks, open channels, culverts, and other SWM-related facilities.
- Restore stream banks and fish habitat damaged by uncontrolled runoff.
- Protect lakes, streams, and wetlands and try to prevent future problems.
- Send out field investigators to respond to citizen complaints about stormwater and water pollution and to provide technical assistance when needed.
- Implement the SWMP to ensure that the City complies with the current NPDES Phase II permit.

The City six-year Stormwater Facility Capital Plan is provided in Appendix A.

Non-City Managed Facilities and Services

There are additional public capital facilities and services available to Maple Valley residents. These include facilities and services that are provided through contracts between the City and private or public utility districts and entities, or between individual residents and utilities or district service providers. The location of City's facilities and properties are identified on Figure 7.2 and include fire, public schools, community center, library, cultural resources, and solid waste facilities and services. Facilities and services such as wastewater, water, electrical, natural gas, and telecommunications, which are specifically characterized as "utilities" by the Growth Management Act, are addressed in the Utilities Element.

Support Analysis



Tahoma School District No. 409 provides school facilities and services for the entire City of Maple Valley. The District's Six-Year Capital Facilities Plan, is provided in Appendix B. In 2011 the City Council adopted Ordinance No. O-11-559 establishing a new chapter 16.15 to the Maple Valley Municipal Code, allowing for annual updates to the Capital Facilities Plan including impact fees by reference. The District's 2014–2019 Capital Facilities Plan was adopted by the District on July 29, 2014 and subsequently adopted by the City on September 8, 2014 (Ordinance No. O-14-561).

Planning for human service needs is a requirement of the King County Countywide Planning Policies (CPPs), which state that all jurisdictions shall identify essential community and human services and include them in Land Use, Capital Improvement, and Transportation Elements. Human and community services are those services usually provided directly to individuals or families having difficulty meeting their basic needs. Human services are often segregated into four basic categories:



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Support Analysis

- Subsistence services (food, shelter, clothing, and medical assistance).
- Access services (information and referral, job training, transportation, and translation services).
- Preventative services (counseling and safety from abuse).
- Services for special populations (homeless persons, mentally ill, substance abusers, and persons with development disabilities).

Human services are also closely connected with residential programs and affordable housing. Maple Valley will work with various human service organizations and developers to ensure that affordable housing is provided within the City (see the Housing Element).

Human services are made available to people who choose to use them. The City of Maple Valley does not provide these services directly, but funds some programs on a limited basis and serves as a catalyst to service providers.

Descriptions of Services and Facilities

The main provider of human services in Maple Valley is the Greater Maple Valley Community Center (GMVCC), located at 22010 SE 248th Street (see Figure CF 7.2). This is a forested site at the entrance to Lake Wilderness Park, shared with the Maple Valley Historical Society Museum based on a land use agreement with the City of Maple Valley. It is directly across the street from the Maple Valley Library.

The GMVCC serves the residents of Maple Valley as well as those living in the surrounding communities of Hobart, Ravensdale, and the unincorporated areas near Covington and Renton. While the Center's programs are building-centered they are not building bound. The GMVCC is designated as a 501(c)(3) organization by the Internal Revenue Service.

Existing Level of Service

The Greater Maple Valley Community Center is staffed by five full time staff (Executive Director, Finance Director, two Program Directors, and a Facility Manager) and seven part-time staff. More than 275 community members contribute nearly 10,000 hours of volunteer service every year providing much needed assistance in the areas of board and task force members, administrative aides, program assistants, facility maintenance, resource development, and marketing.

All GMVCC programs and activities revolve around the "Four Pillars of Service." These pillars are Prevention, Health & Wellness, Community, and the Emergency Warming Center. Many GMVCC programs and activities overlap into two or more areas:



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- Prevention
Providing programs, activities and/or guidance that seek to reduce or deter specific or predictable problems. Protect the current state of well-being, or promote desired outcomes or behaviors. Program examples include the Senior Nutrition Program, DateWise (domestic violence prevention for teens), All Stars (substance abuse prevention for youth), AARP Safe Driving, Senior Foot Care, the Youth Council, and Aging Well Yoga.
- Health & Wellness
This involves helping people to be active participants in managing their health and lifestyle. Focusing on the mental, physical, emotional and social components of everyday life to promote independent living and aging in place. Program examples include Line Dancing, Yoga, Hiking Club, Volunteer Drivers, the Community Shuttle, and the Medical Equipment Lending Closet.
- Community
Serving as the hub, or gathering place, for the varied and diverse elements of our local society. Providing support for groups to develop kinship, positive growth, and a cooperative spirit to better our neighborhoods. GMVCC is building centered but not building bound. Program examples include multi-generational special events, pet food distribution, Toddler Time, Family Movie Night, community forums, and a preschool resource fair.
- Warming Center
GMVCC is the gathering place in the event of a local, community-wide emergency, especially a cold weather emergency. They will offer shelter, warmth, and sustenance to those who need assistance the most in the event of a disaster.

The Greater Maple Valley Community Center partners with a variety of community based organizations that provide services to our community. The GMVCC provides space and overhead costs to these groups at no or reduced cost. These organizations include:

- AARP
- Aging & Disability Services
- Alcoholics Anonymous
- Autism Support Group
- Boy & Girls Scout troops
- Covington Quilters
- Friends N' Fun (developmentally disabled adults)
- International Social Club
- King County Juvenile Probation
- Maple Valley Family Circle
- Maple Valley Foster Support
- Maple Valley Home School Support
- Maple Valley Rotary Club
- Meals on Wheels
- Seattle – King County Humane Society
- Seattle - King County Public Health



CAPITAL FACILITIES

Support Analysis

- Valley Cities Counseling

The Center's hall is also available for rent by public for such activities as weddings, receptions, team parties, memorial services, etc.

Needs and Plans

The Center continuously evolves its programming based on the needs of the community. The GMVCC focuses on human service programming with limited recreational offerings available in order to meet the socialization needs of our populations.

The main GMVCC facility is nearly 40 years old and has undergone several renovations and upgrades. Despite these modifications, the facility is undersized and not able to meet many of the needs of today's requirements (i.e., not wired for multiple computer stations, barely meets current ADA standards, is below par in CPTED expectations, the majority of the parking is unpaved and often deeply rutted, etc.). A general lack of program space results in a lower than optimum level of service for all target populations.

The interim "Den" is undersized and does not include many of the amenities normally associated with a teen center. The most glaring need is a gymnasium or other indoor, active recreational facility that can be used during the cold and rainy seasons. Public transportation available to teens to access the Den is virtually non-existent.

Access to the facility is hindered by a lack of reliable mass transit. Non-driving seniors, low-income residents, students, the disabled, and others without access to cars are often not able to get to and from the GMVCC in a reasonable time frame. This challenge is compounded by program participants who live in the more rural parts of the GMVCC service area.

Financing

The Maple Valley Community Center operates on a yearly budget of approximately \$650,000 which comes from both public and private sources. Approximately thirty percent (30%) of GMVCC funding is allocated by the City of Maple Valley. These funds are leveraged to bring in over \$400,000 in county, corporate and foundation, United Way, and private philanthropic dollars to the Community Center.

Library Facilities

The Maple Valley Library is part of the King County Library System. It offers a wide range of educational and recreational programs.

Level of Service Standards

King County Library levels of service are discussed in terms of size on a scale from small to large. The size refers to a combination of factors: the number of volumes, the square footage of the facility, and the variety of programs offered by the library service.

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Maple Valley's library is currently considered a "medium-sized" library. It has the benefit of access to King County's Library System of 3.2 million volumes of reading materials, and thousands of audio cassettes, videos, compact disks, computer disks, magazines, and periodicals. When the City of Maple Valley was incorporated, the community chose to be considered an "annex" of the County library system rather than start its own programs.

The Maple Valley Library building has a total of approximately 4,000 square feet. Programs are nearly always at their maximum capacity. Program capacities range from 65 to 250 people and include programs open to all ages such as summer reading programs and daytime pre-school education. On site, the library has computers that provide access to the World Wide Web.

Needs and Plans

King County library is on a site directly across from the Maple Valley Community Center at the intersection of Witte Road and SE 248th. This facility is approximately 10,000 square feet. be considered a "large-sized" library under the County standards.

Financing

Library financing is provided through special assessments levied by King County on local property owners. Special purpose bond issues are also utilized from time to time for major countywide library modernization and expansion plans.

Cultural Resources

Cultural resources enhance quality of life and economic vitality. They are a measure of a community's identity and social well-being as expressed through their gatherings, art, music, and many other forms. The infrastructure for cultural activities can range from local to regional in scale even when located within a small city such as Maple Valley. They include multi-purpose public and private facilities such as schools, the community center, park and recreation facilities, and arts and heritage centers. They also include single-purpose facilities such as concert halls, theaters, museums, galleries, studios, and archives. Cultural providers can range from theater or dance companies, ethnic associations, heritage societies, and park and recreation programs to individual artists, heritage specialists, and practitioners of traditional customs.

Cultural organizations and historic sites are recognized by both the Growth Management Act and Countywide Planning Policies (CPPs) as major contributions to a region's economic vitality and overall quality of life. The CPPs require that *"all jurisdictions encourage land use patterns and implement regulations that protect and enhance historic resources, and sustain historic community character,"* and they suggest that *"all jurisdictions work individually and cooperatively to identify, evaluate, and protect historic resources including continued and consistent protection for historic resources and public art works."*

Existing Resources

The Maple Valley Historical Society is a non-profit volunteer organization and the primary cultural resources organization in Maple Valley. This group is currently maintaining two museums in the City: the Fire Engine Museum (housing a restored 1926 Howard Cooper Fire Engine); and the

**CAPITAL FACILITIES****Support Analysis**

Gibbon/Mezzavilla General Store Museum. Even though the Lake Wilderness Lodge has been designated by King County as a County Historical Landmark, it is owned and operated by the City without any direct support from the Historical Society.

The Maple Valley Historical Society also operates the Maple Valley Museum on the top floor of the Old Maple Valley Grade School (a King County Historical Landmark located at 23015 SE 216th Way). Founded in 1972, this museum has preserved memories of the area's past through displays of pioneer life and a collection of community photographs.

Needs and Plans

The Historical Society is looking for funds to build a new museum next to the Fire Engine Museum and the Gibbon/Mezzavilla General Store Museum. This new museum will allow the Historical Society to consolidate all operations onto one site that will also be ADA accessible.

The master plan for the Community Center site will have to incorporate these plans as well. The Community Center location has emerged as a growing civic gathering place since it is within walking distance of Lake Wilderness Park, the Arboretum, and the Maple Valley library as well as adjacent to residential neighborhoods.

Financing

The Historical Society relies on funding from the City, grant funds from King County, and independent fund-raising activities. The Historical Society will be doing a fund raising drive to allow for the building of their third museum in the near future.

Police Services

The City contracts with the King County Sheriff's Office to provide police services to the City of Maple Valley. The Maple Valley Police Department (MVPD) is a full service model. The MVPD is located in City Hall at 22017 SE Wax Road, Maple Valley, WA 98038.

Level of Service Standards

The MVPD currently provides all basic police services to the City of Maple Valley, to include patrol, a Property Crimes Detective, two Special Enforcement/Problem Solving Detectives, and a Traffic Enforcement Officer. The MVPD provides numerous community safety and prevention programs and works with the Tahoma School District to provide them with MVPD School Resource Officers. MVPD has Washington State's largest Police Explorer Post, and currently has a cadre of three MVPD Reserve Police Officers serving their Maple Valley Community. Major Crime investigations (such as robbery and homicide) and specialized police services (such as SWAT, K-9, Bomb Squad, and Helicopter Services), as well as our 911 Communications Services will continue to be provided by the King County Sheriff's Office. The MVPD staff consists of a Police Chief, a Police Sergeant (Operations Supervisor), ten patrol officers, a traffic officer, three detectives as described above, and a civilian police administrative assistant. When there is need for additional assistance due to call loads or a serious incident, King County Sheriff's Office will provide additional supervisors, detectives, deputies, and expertise to assist.



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Support Analysis

The MVDP is small but meets the City's current needs. The officers and chief share office space and support staff with other departments of the City. The City leases 10 marked police vehicles from King County with the City of Maple Valley logo and six unmarked cars. The County is responsible for maintenance of the vehicles. MVPD officers are issued Mountain Bikes and are trained and certified to ride them, so they can provide bike patrol services when and where appropriate. The officers use their MV City Hall office as a base of operations, however, the office is not staffed 24 hours a day. The officers can be contacted by radios or cell phones. Emergency 911 calls are dispatched from the King County Communications Center in Renton. Three phone lines are open for community needs such as appointments with the chief or other officers, requests for presentations or educational materials, reporting of abandoned vehicles or traffic complaints, and any other police concerns in the community.

Level of service standards are usually measured in terms of the average number of minutes the police unit requires to respond to emergency calls or based on the number of officers per thousand population served. The current police level of service is shown in the following table for the year 2014.

Type of Call	Frequency (% of Total Calls)	Average Response Time (minutes)
Priority "X" (life-threatening)	0.35%	4.4
Priority 1 (property crime in progress/injury accidents)	11.50%	8.9
Priority 2 (property crime not in progress/domestic violence)	28.50%	12.1
Priority 3 (routine/vandalism)	56.20%	30.1
Priority 4 (nuisance)	0.40%	39

Source: Maple Valley Police Department

Figure 7.4 - Response Times and Call Frequencies Maple Valley Police (2014)

MVPD received more than 3,500 dispatch calls for service in 2014. The response time anticipated for requests for police service are based on the type or priority of the call. Police calls are categorized by five different priority levels. Emergency calls which are considered life-threatening (priority X) or involve a crime in progress such as robbery, rape, or an injury accident (priority 1) demand the fastest response time. Calls for property crimes that have already occurred, such as burglary or domestic violence cases (priority 2) receive the next fastest response time. Priority 3 calls are relatively routine, such as reported theft and vandalism, and are the most common. Finally, nuisance calls (priority 4), such as noise, receive the lowest priority. Overall the City has a relatively low crime rate and crimes against people are rare.

Needs and Plans

Maple Valley Police are currently developing a number of public education programs, including group presentations and dissemination of materials on block watches and crime prevention. Population



CAPITAL FACILITIES

Support Analysis

growth and increased traffic flows are creating increased demand for additional police services. Future demand could strain the MVPD's current capacity.

Financing

The City currently operates on a renewable annual contract with the King County Sheriff's Office for police services and recently adopted the 2015 police services contract. The City pays for these services from of its general fund. However, for planning purposes, contracted costs are not considered as direct capital improvements costs.

Fire and Emergency Medical Services

Maple Valley's fire suppression, emergency medical services (EMS), and fire prevention services are provided by King County Fire Protection District 43, known as Maple Valley Fire & Life Safety (MVFLS). The District operates three career fire stations within the city limits of Maple Valley: Fire Station No. 80, located just north of Kent-Kangley Road on SR 169; Fire Station No. 81, located at SE 231st Street and SR 169; and Fire Station No. 83, located at SE 272nd Street and 216th Avenue SE (see Figure 7.2). Supporting the three career fire stations are three volunteer stations located outside the city limits but within the Fire Districts area.

On July 23, 2012, the City Council adopted Ordinance No. O-12-508, establishing a new chapter 16.60 in the Maple Valley Municipal Code for a growth-related impact fee program. MVFLS District adopted their Six-Year (2014 - 2019) Capital Facilities and Equipment Plan Update on July 10, 2014. The City of Maple Valley subsequently adopted the plan on September 8, 2014 (Ordinance No. O-14-558). The District's Six-Year Capital Facilities Plan, is provided in Appendix C.

Solid Waste Service

Solid waste service to Maple Valley is provided by Recology Cleanscapes and Republic Services. Figure 7.3 depicts the franchise service area for each provider.



CAPITAL FACILITIES

Support Analysis

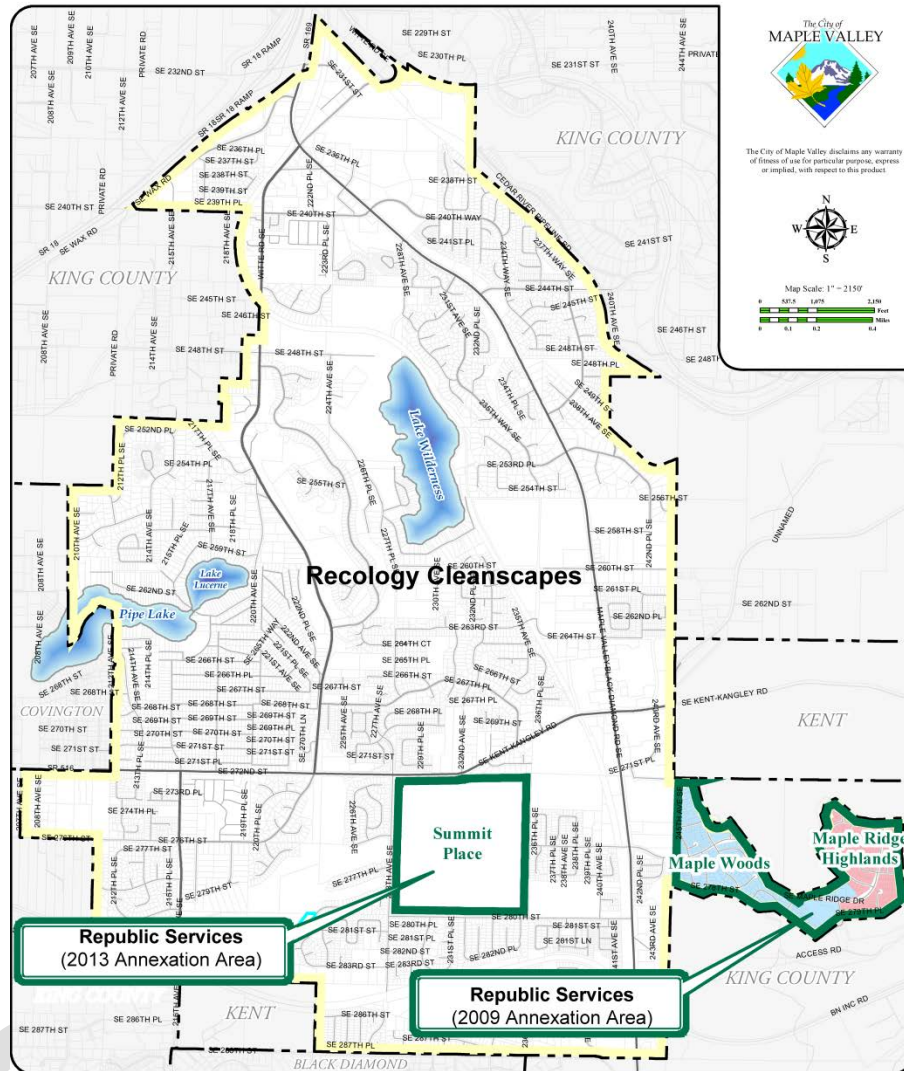


Figure 7.5 - Solid Waste Franchise Areas

Facility Description

Recology CleanScapes, Inc., an employee-owned company, provides contracted comprehensive solid waste, recyclable, and food and yard waste collection services to the City of Maple Valley except in the 2009 annexation area of Maple Ridge Highlands and Maple Woods and the 2013 annexation area of Summit Place, where services are provided by Republic Services. The franchise agreement with Recology CleanScapes, Inc. is for a term of seven years with two 2-year extension options through August 31, 2025. Republic Services' franchise agreement is for a ten-year term that expires on July 26, 2019.

All municipal solid waste in the City is directed to the King County Cedar Hills Regional Landfill pursuant to interlocal agreement between the City of Maple Valley and King County Solid Waste.



CAPITAL FACILITIES

Support Analysis

Garbage is currently collected weekly with recyclables and food and yard waste collection alternating every other week. Cedar Hills Regional Landfill is King County's only operating landfill. It is located on Cedar Grove Road north of Maple Valley city limits.

Level of Service Standards

Waste disposal companies operate by City issued contracts and/or ordinance in compliance with the King County Comprehensive Solid Waste Plan, the King County Code, the Seattle-King County Department of Public Health, the Solid Waste Section of the Environmental Health Services Division of Public Health, and the City of Maple Valley Municipal Code.

King County prohibits the disposal of construction, demolition, and land clearing debris into Cedar Hills Regional Landfill. These materials must be transported to the regional landfills owned by Rabanco and Waste Management.

Needs and Plans

King County Cedar Hills Regional Landfill is calculated to reach capacity in 2030, based on 2014 tonnage forecasts and projections of steady progress toward a 70% recycling rate. King County Solid Waste Division coordinates regional planning efforts with stakeholders to ensure reliable cost-effective and environmentally sound options for long-term disposal. Long-term options considered include, but are not limited to, waste export, waste reduction and recycling, product stewardship, and waste to energy. Stakeholders participate in the King County Comprehensive Solid Waste Plan and the Solid Waste Transfer and Waste Management Plan review and updates, among others. King County bases its plans for the generation of waste and materials to be recycled on a 20-year projection for the region.

Financing

Solid Waste disposal rates are set by King County Council and are adopted to support operation costs, administrative costs, and debt service for implementing the Solid Waste Transfer and Waste Management Plan. For more information please refer to the King County Comprehensive Solid Waste Plan.

**CAPITAL FACILITIES****Goals & Policies****GOALS & POLICIES**

The Washington State Growth Management Act (GMA) requires cities to prepare a Capital Facilities Element that contains the following:

- An inventory of current capital facilities owned by public entities showing the location and capacity of those public facilities.
- A forecast of the future needs for such capital facilities.
- The proposed locations and capacities of expanded or new capital facilities.
- At least a six-year plan that will finance capital facilities within the projected funding capacities and clearly identify sources of public money for such purposes.
- A requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities element, and finance plan within the capital facilities plan element are coordinated.

This Capital Facilities Element is concerned with existing levels of service, needed improvements and future plans, and funding for public facilities and services that are of relatively large scale, are generally non-recurring high cost, and may require multi-year financing. For the purposes of this element, facilities investments include major rehabilitation or maintenance projects on capital assets; construction of new buildings, streets, and other facilities, and land for parks and other public purposes.

This section contains the goals and policies that address the capital facilities that are owned and operated by the City, and those facilities that are provided by other public entities. Other services, such as electricity, natural gas, cable, and telephone are discussed in the Utilities Element. The Capital Facilities Supporting Analysis section of this Plan contains the background data that provides the foundation for the following goals and policies. The Support Analysis section also includes the list of potential capital projects to implement the goals of the Comprehensive Plan.

GOALS

- CF-G1** Provide continuous, reliable, and cost-effective capital facilities and public services in the city and its Urban Growth Area in a phased, efficient manner, reflecting the sequence of development as described in the other elements of the Comprehensive Plan.
- CF-G2** Enhance the quality of life in Maple Valley through planned provision of public capital facilities either directly by the City or in coordination with other public and private entities.
- CF-G3** Maintain and enhance capital facilities that will create a positive economic climate.
- CF-G4** Ensure that public facilities necessary to support new development are adequate at the time the development is available for occupancy. This determination shall be based on locally adopted level of service standards and in accordance with Washington State Law.



CAPITAL FACILITIES

Goals & Policies

- CF-G5** Ensure efficient and equitable siting of essential regional capital facilities through cooperative and coordinated Planning with other jurisdictions in the region.
- CF-G6** Ensure that new growth and development pay a proportionate share of the cost of new facilities needed to serve such growth and development.

POLICIES

GENERAL

- CF-P1** The City's six-year Capital Improvement Program (CIP) shall serve as the short-term budgetary process for implementing the long-term Capital Facility Plan (CFP). Project priorities and funding allocations incorporated in the CIP shall be consistent with the long-term CFP.
- CF-P2** Maintain an inventory of existing capital facilities owned by public entities. This inventory shall include location and capacities of such facilities.
- CF-P3** Identify future needs regarding improvements and space requirements, based on adopted levels of service standards and forecasted growth, in accordance with this plan and its established land uses.
- CF-P4** Coordinate with other public entities that provide public services within City's planning area in the development of consistent level of service standards.

FINANCING & FUNDING PRIORITIES

- CF-P5** Capital Facility improvements that are needed to correct existing deficiencies or maintain existing levels of service should have funding priority over those that would significantly enhance service levels above those designated in the Comprehensive Plan.
- CF-P6** Improvements necessary to provide critical City services such as police, storm water management, parks and transportation at designated service levels concurrent with growth shall have funding priority.
- CF-P7** Consider all available funding and financing mechanisms, such as utility rates, bonds, impacts fees, grants, debt financing, special assessment, special purpose districts, and local improvement districts for funding capital facilities.
- CF-P8** The City will maintain the practice of designating its street and capital improvement revenue, including the dedication of up to 25 percent of its sales tax and equalization revenue, for the funding of its Capital Improvement Program.
- CF-P9** The City will review fees and user charges on a periodic basis to determine if they are covering, but not exceeding, the cost of providing these services.



CAPITAL FACILITIES

Goals & Policies

- CF-P10** Provide opportunities for public participation in the development or improvement of capital facilities.
- CF-P11** Solicit and encourage citizen input in evaluating whether the City should seek to fund large communitywide capital facility improvements through voter-approved bonds.
- CF-P12** The City will establish and maintain transportation, park, fire and school impact fees in appropriate areas to help ensure that new growth pays for the impacts it generates.
- CF-P13** The City will update its Capital Improvement Program on an annual basis consistent with the adoption of the annual budget and the Comprehensive Plan Amendment process.

MITIGATION & EFFICIENCY

- CF-P14** Maximize on-site mitigation of development impacts to ensure that facilities are in place at the time of development.
- CF-P15** Encourage the shared use and co-location of public capital facilities including, but not limited to, community facilities such as parks, libraries, schools and community meeting facilities.
- CF-P16** Stormwater runoff shall be managed through a variety of methods, including, but not limited to, source control, retention/detention, filtration, infiltration, and dispersion. Infiltration and dispersion of stormwater (or low impact development) shall be implemented where feasible, given the geological, engineering, and water quality constraints outlined in the City's adopted stormwater design and management manual.
- CF-P17** Stormwater runoff caused by development shall be managed to prevent unmitigated significant adverse impacts to water resources and downstream properties caused by increased flow rates, flow volumes, or pollutants. Non-structural methods of stormwater runoff control should be encouraged wherever possible. The City's stormwater management regulations shall include provisions to:
- Preserve water quality.
 - Protect or enhance the hydraulic and habitat functions of the natural drainage system.
 - Control peak runoff rate and runoff volume from new development to approximate pre-development levels.
 - Maintain stable stream channels and adequate low flows and reduce future storm flows, erosion, and sedimentation. Stormwater runoff from development that is situated on or adjacent to steep hillsides or adjacent to ravines shall be routed so that it does not cause gully erosion, lead to mass wasting, or create erosion at the bottom of the slope.



CAPITAL FACILITIES

Goals & Policies

- CF-P18** Recognize that new development may cause environmental impacts, including but not limited to, flooding, erosion and decreased water quality in downstream communities and natural drainage courses. The City shall continue to actively participate in developing and implementing regional water quality planning and flood hazard reduction efforts with King County Surface Water Management within all drainage basins that affect the City. The City should consider updating its stormwater and flood hazard regulations and programs consistent with these efforts.

CITY-MANAGED CAPITAL FACILITIES & SERVICES

- CF-P19** Develop and implement a Stormwater Management Plan that prioritizes installation of needed facilities. Special consideration shall be given to concurrent installations to promote construction cost efficiency and minimize disruptions to the public.
- CF-P20** Maintain stormwater treatment and flow control BMPs/facilities properly to ensure their functionality and reliability. The City shall implement procedures to ensure that public and private stormwater collection, retention/detention, filtration, infiltration, and dispersion facilities are properly maintained.
- CF-P21** Provide the most economical public safety and police protection services available that meets the needs of the City.
- CF-P22** The City of Maple Valley will work cooperatively with Maple Valley Fire and Life Safety to plan for future fire and emergency medical services and facility needs. These efforts should focus on the District's need to provide facilities that are central to the District's service area.
- CF-P23** Promote community awareness of human service needs and the resources available to meet them. For example, the City should regularly coordinate with the Maple Valley Library and Community Center to help inform residents about programs and services.
- CF-P24** The City shall serve primarily as a funding grantor rather than a direct provider of human services.
- CF-P25** The City shall cooperate with the Maple Valley Library, Community Center, Tahoma School District, and other jurisdictions and entities, to cooperatively plan for future human services program and facility needs. These efforts should focus on the development and use of schools as a focal point for the delivery of services to children and families.
- CF-P26** Ensure that human service programs reflect and are sensitive to the cultural, economic and social character of the City.
- CF-P27** Ensure that human service needs and impacts are considered in all land use, capital improvement and transportation project actions.



CAPITAL FACILITIES

Goals & Policies

ESSENTIAL PUBLIC FACILITIES

- CF-P28** Coordinate with King County and other jurisdictions to establish a process for siting public capital facilities of a Countywide or Statewide nature. These facilities are known for their difficulty to site, including airports, solid waste landfills, higher educational facilities, energy generating facilities, and prisons.

CONCURRENCY MANAGEMENT

- CF-P29** The following level of service guidelines should be used to evaluate whether existing public facilities are adequate to accommodate the demands of new development:

- Water
Require that new development have adequate water supply for consumption and fire flow. Maintain the current-year level of service acceptable Countywide in gallons per day per equivalent residential unit.
- Stormwater Management
Require that new development and redevelopment have adequate stormwater treatment and flow control BMPs/facilities to meet the Washington State Department of Ecology and National Pollutant Discharge Elimination System (NPDES) Phase II municipal stormwater permit requirements.
- Wastewater
Require that adequate wastewater treatment capacity, transmission and collection facilities are in place to accommodate new development at the current level of service to meet American Public Works Association and Washington State Department of Ecology requirements.
- Recreation
The level of service standards for neighborhood and community parks, trails, and open space shall be as adopted in the City's Parks, Recreation, Cultural, and Human Services Plan.
- Police Protection
The Maple Valley Police Department shall provide a service response time of 4.4 minutes for life-threatening, crime in-progress calls; and 8.9 minutes for priority one property crimes in progress.
- Fire Protection
Fire District #43 should continue to provide a total alarm response time of 7 minutes for urban areas, 8 minutes for suburban areas and 13 minutes for rural areas, 90% of the time.



CAPITAL FACILITIES

Goals & Policies

- Transportation

The City will adopt a Level of Service (LOS) standard for City streets based upon an examination of County LOS standards and the standards of adjacent jurisdictions and will seek to provide consistency with regional transportation systems. See the Transportation Element of the Maple Valley Comprehensive Plan for the adopted LOS.

- CF-P30** A development shall not be approved if it causes the level of service on a capital facility to decline below the standards set forth in Policy CF-P27, unless capital improvements or a strategy to accommodate the impacts are made concurrent with the development. For the purposes of this policy, “concurrent with the development” shall mean that improvements or strategies are in place at the time of the development or that a financial commitment is in place to complete the improvements or strategies within six years of the date the development is approved.
- CF-P31** If adequate facilities are currently unavailable and public funds are not committed to provide such facilities, developers must provide such facilities at their own expense.
- CF-P32** The City shall adopt a Transportation Concurrency Management Ordinance, in accordance with the GMA.
- CF-P33** Require that development proposals are reviewed by the various providers of services such as school districts, sewer, water, stormwater water management, police and fire departments to ensure available capacity to accommodate development and to identify needed system improvements.



Element 8
UTILITIES

**UTILITIES ELEMENT
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INTRODUCTION

The Growth Management Act (GMA) requires the Utilities Element of the Comprehensive Plan to consist of *“the general location, proposed location and capacity of all existing and proposed utilities, including but not limited to, electrical lines, telecommunication lines and natural gas lines.”* Accordingly, the following utilities providing service to Maple Valley are addressed in the Utilities Element of the Comprehensive Plan:

- Potable Water
- Sanitary Sewer
- Electricity
- Natural Gas
- Telecommunications
- Solid Waste Service
- Surface Water Management

The City of Maple Valley does not own or manage most of its public utilities. The only City-owned utility is Surface Water Management, which is discussed in the Capital Facilities Element.

The Utilities Element gauges the ability of existing and planned utility facilities to meet future demand. Generally, the current provision of utility services and the ability to meet future population demand in Maple Valley are not hindered by any serious constraints. This Support Analysis section presents basic information regarding the general location, proposed location, and capacity of all existing and proposed utilities, including electrical, natural gas, telephone, cable, surface water, solid waste, and water and wastewater utilities. It should be noted that where utility providers are private corporations, specific information on utility consumption and demand are considered to be proprietary, and are therefore not disclosed. Further, information is available from individual utilities, or in the planning documents of the various service providers.

The City maintains a number of franchise agreements with utility providers, which allow for the existence of support facilities, such as water and sewer mains and appurtenances, cable, electrical, and natural gas facilities within the City’s rights-of-way (streets). The status of the franchise agreements are noted in the listing of current providers.

POTABLE WATER SERVICE

Drinking water for Maple Valley is provided primarily by two independent water districts: the Covington Water District, which provides water to the southernmost half of the City; and the Cedar River Water and Sewer District, which provides water to roughly the northernmost third of the City. One Group-A water system; Cherokee Bay Community Club, Inc. provides service to approximately 840 customers within the City to isolated areas within the Covington Water District franchise boundary. Both Covington Water District and Cedar River Water and Sewer Districts have 20-year



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franchise agreement with the City of Maple Valley that expire on January 1, 2026 and May 22, 2026, respectively. Figure 8.1 depicts the franchise service area of each water district.

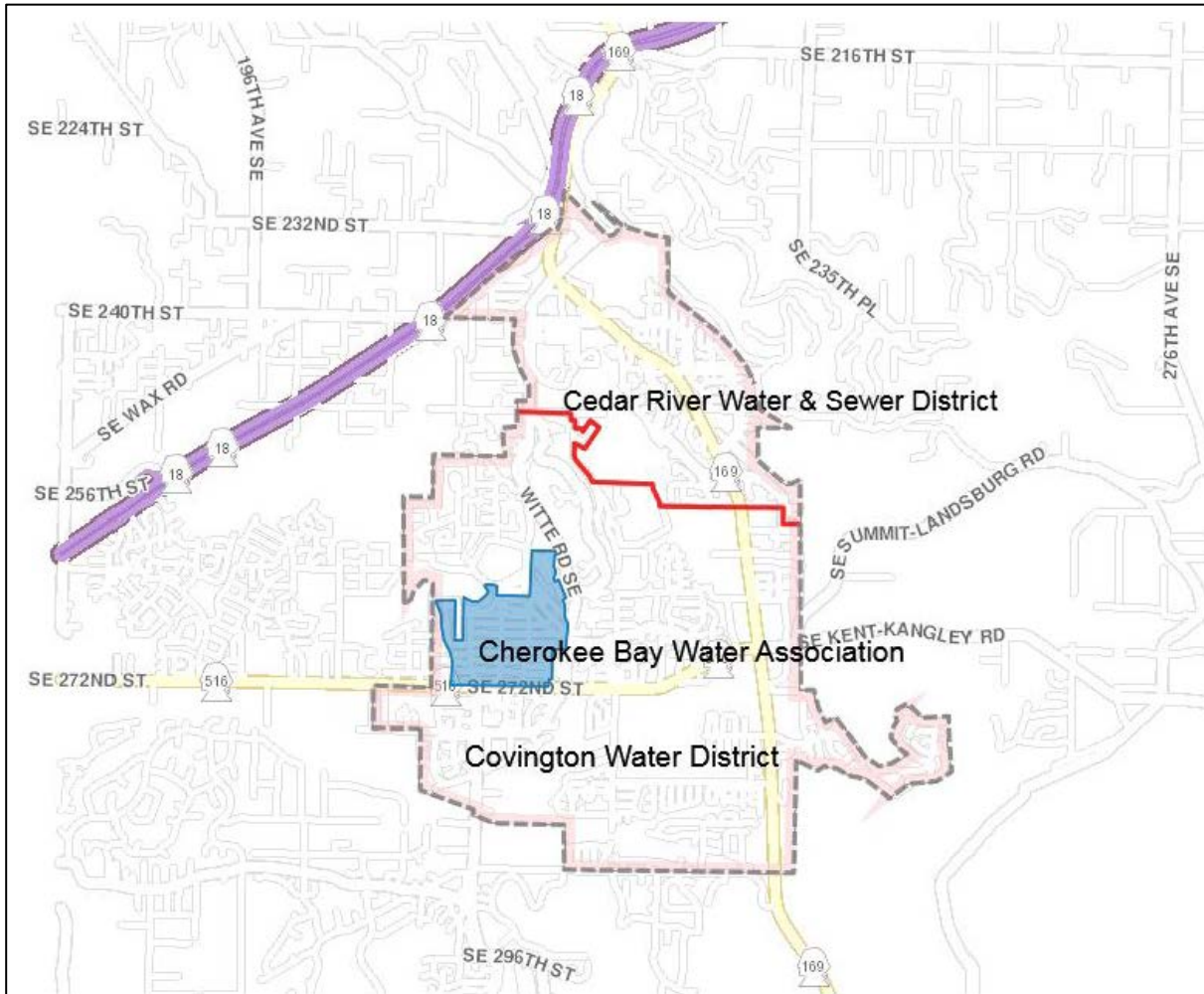


Figure 8.1 - Water Districts

Covington Water District

The Covington Water District is located in southeast King County on a plateau to the east of the cities of Auburn and Kent. The District is roughly bounded by Soos Creek on the northwest, State Route 18 on the southwest, the Ravensdale area on the northeast, and the Green River on the south. The District's service area boundary encompasses approximately 55 square miles that includes portions of the cities of Covington, Maple Valley and Black Diamond as well as unincorporated King County. Maple Valley is located in the northern portion of the District.



The District operates several facilities for the supply, storage and distribution of water. Supply to the system is provided primarily by the Second Supply Pipeline of Tacoma, with support from ten production wells from two well fields located at the 222nd Place and Witte sites, plus a single well at a site located off of 264th Street. The District receives water from the Regional Water Supply System (RWSS) through a partnership arrangement with Tacoma, City of Kent and Lakehaven Utility District. In addition, the District has emergency interties with King County Water District No. 111 and the City of Kent. The District also maintains operational connections with the Cedar River Water and Sewer District (CRWSD) at four locations, two of them within the City.

Cedar River Water and Sewer District

The Cedar River Water and Sewer District (CRWSD) covers an area of approximately 36 square miles south and east of Renton, in the vicinity of the City of Seattle's Lake Youngs watershed. Lake Youngs receives potable water from the Cedar River Watershed. The watershed is a closed area of approximately 96,000 acres lying between Hobart and the Crest of the Cascade Mountains. Maple Valley is located in the southern end of the District's East Area. The City of Seattle furnishes water by contract to the District, and is responsible for water quality and quantity. The City of Seattle's source of water is the Cedar River watershed. CRWSD also provides peak summer water from an independent well located north and east of the City. The well generally operates from early spring to early fall of each year.

A.C. Butcher Water System

The A.C. Butcher System, adjacent to Rock Creek Elementary School, ceased operation 15 years ago, leaving 10 homeowners without water service. The Covington Water District stepped forward to restore water service to residents, but residents did not support improvements necessary to improve their water system to any reasonable standard. The Covington Water District has provided water to the residents through a master meter ever since and looks toward redevelopment of the area to properly rehabilitate the system serving the ten properties. Water District #94 was completely absorbed by Covington Water District prior to 2006.

Level of Service Standards

Minimum Level of Service (LOS) standards for water and sewer facilities are recommended by State and Federal agencies. All water purveyors are required to comply with these standards as well as minimum design standards for water systems in accordance with the U.S. Environmental Protection Agency, Washington State Department of Health (DOH) and the King County Coordinated Water System Plan.



DOH’s “Sizing Guidelines for Public Water Supplies” is the primary document governing the sizing and design of public water systems in the State of Washington. These standards are as follows:

Item	Standard
Minimum Source Requirement	800 gallons per day (gpd)/connection
Storage Replenishment	72 hours
Standby Storage	200 gallons/equivalent residential unit (ERU)
Fire Flow	Urban residences – 1,500 gallons per minute (gpm); Maple Valley Commercial – 3,000 gpm
Fire Suppression Storage	fire flow @ 20 pounds per square inch (psi)
Minimum pressure	20 psi
Normal working system pressure	50 – 80 psi (not less than 35 psi and not greater than 125 psi)
Duration of Fire Flow	1 hour/1,000 gpm (Depends on Fire Marshal determinations)
Flow velocities	Not to exceed 8 feet per second (fps) – highest demand and fire flow

Water districts measure their level of service in terms of supply as well as flow. Supply is measured in gallons per day (gpd) or in millions of gallons per day (mgd). Metering is reported in ccf (hundreds of cubic feet). Water flow (and fire flow) is measured in terms of gallons per minute (gpm).

Existing Levels of Service

The current level of demand for residences in various parts of King County fluctuates between 175 and 436 gpd, measured in terms of Equivalent Residential Units (ERU’s). With an average of 2.6 residents per household, and an average demand of 360 gallons of water per connection, this means that each County resident is using roughly 138 gallons per day. Consumption regionally and nationwide has dropped considerably due to conservation and fear of shortages.

Covington Water District

The Covington Water District completed a Comprehensive Water System Plan (WSP) in accordance with the State Department of Health Drinking Water Regulations (WAC 246-290), the requirements of King County, and the State’s Public Water System Coordination Act of 1977 (RCW 70.116). The Covington Water District Water System Plan update (2014) is currently in draft form. The existing WSP was approved by the State Department of Health (February 2007) and by the King County Council with the condition that District undertake a series of regional coordination and planning efforts.

The overall supply of the Covington Water District’s system in 2012 was 12.60 mgd. The average daily demand is 3.56 mgd. During peak flows demand reaches about 7.4 mgd. By 2035, the average and maximum day water demand is forecast to be 6.3 mgd and 13.3 mgd respectively.

**Cedar River Water and Sewer District**

Between 1994 and 2005, the Cedar River Water and Sewer District experienced a growth rate in number of connections of approximately 60%; however, water sales during the same time increased by only 20%. The average use per connection during that period went from 633 gallons per connection per day in 1994 to 470 gallons per connections per day in 2005. Average use per single family residence or ERU has declined from 237 gpd in 1994 to an average of 174 gpd in 2013. Those reductions in water use exceeded anticipations and reflect successful conservation efforts and stewardship of water as a finite resource.

Existing Conditions**Covington Water District**

The Covington Water District relies upon County and City land use designations to forecast future water supply requirements. Demand for Covington Water District services is affected by increasing urbanization. As of the end of 2013, there were 17,031 service connections; 96% are residential and 4% are non-residential.

The Covington Water District's conservation program has been further shaped by its status as a member of the Cascade Water Alliance (Cascade) from 1999 to 2012. All Cascade members were committed to approaching water conservation in a similar manner, and to equitable member participation/benefit within the context of Cascade's conservation program. Also, during its membership in Cascade, the Covington Water District continued to maintain independent customer based (demand side) and supply side conservation programs. During that time, the Covington Water District's demand side conservation program was reshaped to include participation in and consistency with Cascade's program and to eliminate program duplication. The Covington Water District ended its membership in Cascade in late 2012. However, the Covington Water District continues to include some of the conservation measures implemented by Cascade in its current and future conservation program.

The Covington Water District also has potential to use water from the sources supplying the Cedar River Water and Sewer District. The Cedar River Water and Sewer District also has the potential to use water from Covington Water District. All water balanced between the two districts is transferred through interties. This Joint Agreement calls for joint ownership, operation of water storage and transmission facilities between the two districts to facilitate the balancing of water. The agreement has been supported by the City of Seattle and the Seattle Public Utilities. Water balancing between the two districts must be achieved with no net flow on an annual basis.

Cedar River Water and Sewer District

The Cedar River Water and Sewer District is a fully metered Group A water system, that served 10,500 ERU's through 7,789 connections in 2014. Nearly 92% of the Cedar River Water and Sewer District's current accounts were single-family residences and the remaining 8% were multi-family, commercial and community services such as churches and schools.



The Cedar River Water and Sewer District system includes three water supply connections to the Seattle regional water system, one groundwater well, 8.1 million gallons of water storage contained in 7 separate storage reservoirs, 11 pump stations, 18 pressure zones and a network of transmission and distribution pipelines that serve the area.

Future Plans

Covington Water District

The Covington Water District's future improvement projects are selected based on their effectiveness to eliminate deficiencies in the water system. To budget for the identified improvements, projects are assigned a planning-level cost and placed on a year-by-year schedule. Projects that are high priority, and have an associated high degree of implementation certainty, are slated for implementation within the six-year planning period. Projects that are given a moderate or low priority, and/or for which the implementation schedule is unknown (e.g., projects funded in part by developers), are placed on a schedule for implementation within the twenty-year horizon. The Covington Water District revisits its CIP schedule on an annual basis. This is done to confirm project priorities and to coordinate schedules with the transportation improvement plans of the local jurisdictions.

The three most common forms of alternative payment for improvements are revenue bond, the Public Works Trust Fund (PWTF), State Revolving Fund (SRF) and developer extension agreements. Revenue Bonds are secured solely on the revenue developed by the District, don't require an election, and may result in higher water rates. The Public Works Trust Fund provides low interest loans, loan guarantees and technical assistance to the Covington Water District. It is administered by the Washington State Department of Commerce. Developer Extension Agreements are necessary to provide adequate levels of service to new developments. The developer in this case is required to bear the cost of bringing service to a property and upgrading the system to serve the property before being allowed to connect to the system. This type of arrangement is effective for the Covington Water District in allocating the financial burdens of accommodating new growth.

Cedar River Water District and Sewer District

The Cedar River Water and Sewer District receives potable water from Seattle Public Utilities Cedar River Watershed through a long-term water sales agreement. The current agreements regarding water supply run to January 1, 2062, with a 50-year renewal clause. The Cedar River Water and Sewer District also owns a well that provides a small volume of peaking water supply.

The Cedar River Water and Sewer District is in the process of updating their Comprehensive Plan. The completed ten-year Plan will identify and prioritize the capital expenditures, rates, and debt levels well into the future. The Plan will also prioritize capital projects based on such issues as water quality, fire flow, water main replacement, and expansion to new customers and services.

Water management within the City of Maple Valley could also change. Future change is possible at the request of Cherokee Bay, but they have not expressed interest at this time. The Covington Water

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District is currently seeking updates to intertie agreements with Cedar River Water and Sewer District in order to better address operational conditions. The original agreements were written around construction and implementation more than operational characteristics. With changes in Cedar River Water and Sewer District supply conditions and growth patterns within the Cedar River Water and Sewer District, it is important that operational issues be addressed to modernize the intertie agreements.

In a similar fashion, the Cedar River Water and Sewer District's Partnership Agreement with the Regional Water Supply System (RWSS) is in need of updates for the same reasons. The original Partnership Agreement was structured to create an entity for construction of major water development projects and less toward operational relationships. The RWSS Partnership and Covington Water District have developed plans for emergency operations and treatment at the project headworks as well.

Financing**Covington Water District**

The Covington Water District has a total CIP budget for 47 separate projects valued at \$41,367,789 (\$44,758,859 inflated) over the 2014–2019 planning horizon. Significant projects (presented in inflated dollars) during this planning period include completion of the Green River Filtration Facility (\$9.1M), Tank 1 Relocation (\$5.5M), Tank 3 Seismic (\$3.5M), Tank 4 Seismic (\$4.8M), and the 204th Avenue Extension (\$2.5M). Costs are stated in 2014 dollars and are escalated to the year of planned spending for financing projections at an annual inflation rate of 4%.

A level 4.25% annual rate increase is anticipated to meet the Covington Water District's operation and maintenance, debt service, and capital funding needs. As projections of the future are inexact by nature, the Covington Water District will continue to develop a rolling six-year financial planning model on an annual basis in conjunction with development of the subsequent year budget.

Annually, the Covington Water District establishes the revenue requirements for the following year as a part of its budget and forecasting activity. If the revenue requirements exceed the revenue to be generated by existing water rates in the following year, then the Covington Water District engages a rate consultant to make the appropriate analysis and recommend changes to the Board of Commissioners for rates and rate structure after a thorough evaluation by Covington Water District staff. The Covington Water District Board has a long standing policy of using a cost-of-service approach to rate setting. The water rates are set to cover operating costs and the capital improvements needed to replace facilities that serve existing customers and/or construction of new facilities that serve existing customers.

The Covington Water District also reviews annually its Capital Improvement Program, as outlined in Section 9, for the subsequent budget and forecasting years. If there are material changes to the capital improvement plan since the last rate consultant study to set connection charges, the consultant is engaged to re-evaluate the sufficiency of the current connection charges and make a

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recommendation for changes as appropriate to the Board of Commissioners. The Covington Water District Board expects that the connection charges will be set to recover the cost of capital improvements necessary to meet new growth and to address deficiencies in the system.

Cedar River Water and Sewer District

The Board of Commissioners of Cedar River Water and Sewer District have long held to a concept that the Cedar River Water and Sewer District ratepayers deserve the lowest responsible rate possible. To achieve this ideal, the Board of Commissioners review the Cedar River Water and Sewer District financial position and customer count monthly. The Cedar River Water and Sewer District Commissioners also oversee the Annual Budget which looks one year back, and three years forward. The Cedar River Water and Sewer District uses a cost of service rate methodology and periodically has a rate and fee analysis performed to ensure that customers are paying overhead and debt appropriately.

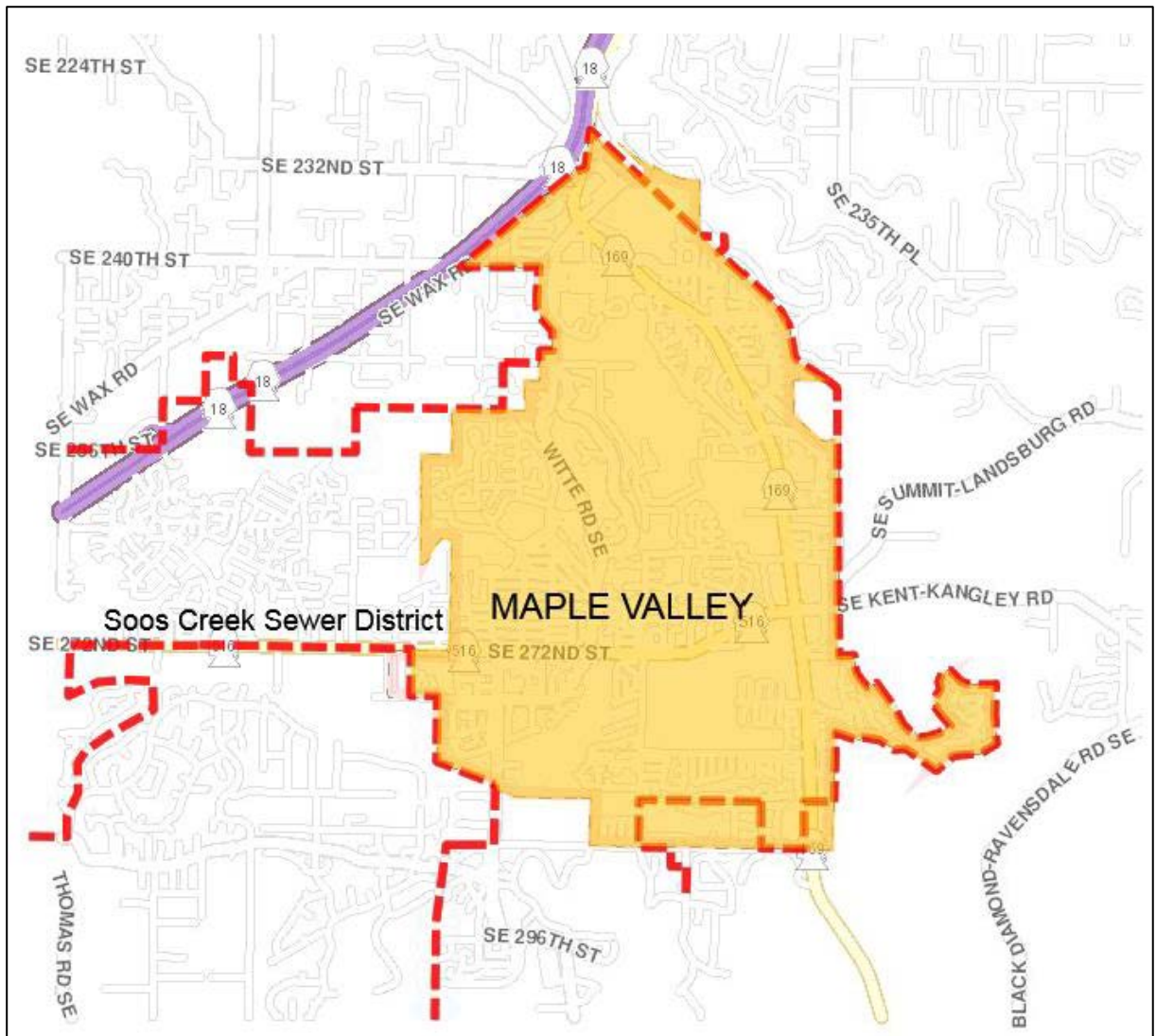
In meeting their commitment to responsible rates, the Commissioners use borrowed debt in a very manageable and limited manner. When the need for a capital project is high and cannot be funded from cash, or the interest rate offered on debt is very attractive (PWTF Low Interest Loans), borrowed debt is always considered. In general however, capital projects are funded from rates whenever possible. When capital projects are constructed that benefit specific areas of the Cedar River Water and Sewer District, the Cedar River Water and Sewer District evaluates repayment options that are fair and reasonable for both the existing ratepayers and the potential customers and sets a payback / connection charge that reflects that balance.

The Cedar River Water and Sewer District anticipates only moderate water system improvements inside the City of Maple Valley within the ten year planning horizon of the Comprehensive Plan being written.

SANITARY SEWER SERVICE

The entire City of Maple Valley is served by the Soos Creek Water and Sewer District (SCWSD). Sewage is conveyed through a system of gravity sewer mains which drain to interceptors or lift stations. Sewer mains follow public rights-of-way as much as possible. The lift stations discharge sewage through pressurized force mains to a downstream system generated mostly by gravity. (Pumped systems are used when it is not feasible to install a total gravity system.) The entire District consists of approximately 480 miles of gravity sewer, 32 miles of force mains, and 29 functioning lift stations.

SCWSD's fifteen year franchise agreement with the City of Maple Valley expires on June 21, 2021. A map of the SCWSD is shown on Figure 8.2.



The City has limited potential for expansion due to its proximity to the City of Black Diamond to the south, the City of Covington to the west and the bordering areas currently designated rural. However, the area referred to as Summit Place, aka the Donut Hole, just south of SE 272nd Street has the potential to significantly impact the City's population. This area is currently outside the Urban Growth Boundary but completely surrounded by the City of Maple Valley's city limits. King County proposed an amendment to the King County Comprehensive Plan that would allow the Summit Place property to be incorporated into the Urban Growth Boundary and become part of Maple Valley's Potential Annexation Area at some time in the near future. Sewer service to this area can be accomplished once this has occurred. The City of Maple Valley is committed to coordinate phasing



development of sewer services according to future land use needs and to meet Growth Management Act (GMA) concurrency requirements, in coordination with the utility providers.

Maple Valley is located within the Southeast Service Area of the SCWSD, which comprises seven sub-basins, the boundaries of which are determined by topography and thus the direction of gravitational flow. Maple Valley's boundaries lie in portions of the Upper Jenkins Creek Sub-basin, the Lake Lucerne Sub-basin (which serves Lake Lucerne, Pipe Lake and Lake Wilderness drainage areas), and the Lake Sawyer Sub-basin. Most of this area contributes wastewater to the Jenkins Creek drainage area through lift stations (pumping stations) which connect to trunk sewers that discharge into the County's Regional Wastewater Treatment Plant in Renton.

Level of Service Standards

The level of service standards most relevant to this sewer system are those that determine the condition of the lines, lift stations and mains rather than the capacity of the system. Wastewater treatment capacity is largely the responsibility of King County Metro which receives and treats the SCWSD's waste. SCWSD's design standards are contained in the Soos Creek Water and Sewer District Sewer Comprehensive Plan, approved in 2014.

Existing Level of Service

The SCWSD system has been expanding to meet the demands of its rapidly growing communities, including Maple Valley. Presently, SCWSD serves approximately 91,800 persons in a 35 square mile service area. This service amounts to 29,500 single family residential sewer connections and an additional 5,800 customer equivalents for a total of approximately 35,300 ERU's.

SCWSD serves approximately 11,000 residents and 150 businesses in Maple Valley, approximately 16 percent of the SCWSD's population. SCWSD does not currently provide service to all of its residents. Some (especially in rural areas) are served by on-site septic systems. Due to the high permeability of Puget Sound glacial soil, it is both SCWSD's and King County's policy to encourage replacement of on-site septic systems in urban areas with public sewer (unless certain environmental constraints exist) in order to lower the risk of groundwater contamination, particularly in areas with denser development and years of septic use. There are areas in Maple Valley still on septic systems, but they are generally in good condition. The GMA and King County regulations do not allow the SCWSD to provide sewer expansions outside the Urban Growth Area, except where needed to address specific health and safety problems or sewer facilities such as pump stations, force mains and trunk lines that do not provide connections to the rural area or other exceptions as identified in the King County Comprehensive Plan.

The annexation of unanticipated rural areas (such as the County's 4-to-1 program that converts adjacent rural lands to urban) is one example that could cause a significant impact on the ability of the SCWSD to meet unexpected demand.



Needs and Plans

SCWSD shall use the Washington State Department of Ecology criteria for determining design flows. The predicted design flow may be calculated by hand or with the aid of a computer hydraulic model. Collection facilities shall be designed to handle predicted flows for a minimum five year design life and conveyance systems shall be designed to handle predicted flows for minimum periods of 20 years, subject to changes in land use and growth projections.

SCWSD developed a capital improvements program in the Sewer Comprehensive Plan, with projects recommended for construction over a ten year period from 2014 through ultimate build-out. The plan was recently amended. Those projects located within the City of Maple Valley are described in the SCWSD Sewer Comprehensive Plan, approved in 2014, including estimated construction costs. Priority work includes repairs to the sewers and mains which are aging and in some cases date back to the mid-1950's. Proposed developer extension lines are also prioritized (These are facilities installed by a developer and later deeded to the SCWSD after completion).

Major planned projects include:

- Witte Road SE Main Upgrade – Phase A

Two existing segments of reverse slope pipe near LS38 experience surcharging during the 20-year storm event. To alleviate this surcharging, these two segments of existing 18-inch pipe will be replaced with new 18-inch pipe with modified inverts that allow for gravity flow. Extended surcharging also occurs upstream of LS38, primarily along Witte Road SE, during the 20-year storm event.

This project is broken into two phases. Phase A includes the replacement of approximately 500 feet of existing 18-inch pipe with new 18-inch main at a positive slope. Phase A is a short-term project with a probable project cost of approximately \$237,000. Phase B includes the replacement of 12-inch and 15-mains with new 18-inch main and is a long term project.

- Witte Road SE Main Upgrade – Phase B

Extended surcharging occurs upstream of LS38, primarily along Witte Road SE, during the 20-year storm event. This project is divided into two phases. Phase A is a short term project that includes the replacement of the existing reverse slope 18-inch pipe (see project P17-10). Phase B includes the replacement of approximately 4,625 feet of existing 12-inch and 15-inch pipe with new 18-inch main.

This is a long-term project with a probable project cost of approximately \$2,023,000.

- Lift Station 47 Addition

The proposed Lift Station 47 and force main will be designed and constructed to serve the proposed Arbors at Rock Creek subdivision and other future development. The Lift Station will have a pumping capacity of approximately 140 gpm. The District will share cost of



construction with the developer. This is a short-term project, with the District's portion of the cost being approximately \$325,000.00.

ELECTRICAL AND NATURAL GAS

Electrical and natural gas service are provided within the City of Maple Valley by Puget Sound Energy, Inc. (PSE). The City has franchise agreements with PSE that run through May 21, 2021 (Ordinance No. O-06-323) and May 7, 2021 (Ordinance No. O-06-324) for electricity and natural gas service respectively.

Description of Facilities

PSE (formerly Puget Sound Power and Light Company [Puget Power] and Washington Natural Gas Company) provides electrical and gas service within the entire City of Maple Valley. PSE is an investor-owned private utility company headquartered in Bellevue, Washington. It is regulated by the Washington Utilities and Transportation Commission (WUTC) and the Federal Energy Regulatory Commission.

PSE builds, operates, and maintains an extensive electric and gas distribution system consisting of generating plants, electric transmission lines, gas supply mains, distribution system substations and pressure regulating stations. This system provides gas and electricity to more than one million residential, commercial, and industrial customers in portions of an 11-county service territory in western and central Washington.

PSE's sources of energy include hydroelectricity, coal, gas, and oil. PSE considers itself a hydroelectric-based company, purchasing about 40 percent of its power from utilities that own five large hydro-facilities on the Columbia River. Six PSE-owned hydroelectric plants, located on the Nooksack, Baker, Snoqualmie, White, and Puyallup rivers add to the hydro base on the west side of the Cascades. Other PSE-owned or partly-owned sources include four coal-fired plants (in Centralia, Washington, and Colstrip, Montana), and six gas and oil-fired plants.

The quality of service within Maple Valley is dependent on the local delivery system operated by PSE, the bulk transmission system operated by Bonneville Power Administration (BPA) and power generation by a number of agencies including PSE. Natural gas is supplied to the entire region through pipelines owned and operated by Williams-Northwest Pipeline Corporation. The "gate station" off the pipeline that provides the natural gas supply to Maple Valley is "Covington Gate," located in the City of Covington. Maple Valley is located in a service area "certificated" to PSE by the Washington Utilities and Transportation Commission.

Electrical System

PSE locates and operates electric facilities within public rights-of-way in accordance with State law and a franchise agreement with King County. Maple Valley adopted this franchise agreement upon

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incorporation in 1997. Facilities are also located on property owned by Puget Sound Energy and easements across private properties.

The transmission system that covers Maple Valley is a grid which provides a link between BPA's Bulk Transmission System and the local distribution system, which connects with customers. The *Bulk Transmission System* is operated by the BPA, which operates a region wide, interconnecting transmission system that supplies electric power to utilities from federal hydroelectric projects throughout the Northwest.

- Transmission Lines
All the transmission lines located in and supplying electricity to Maple Valley are energized at 115kV (Kilovolt). These lines supply power into the Maple Valley distribution system, and provide connections to Black Diamond, Covington, and King and Pierce Counties. Power is transferred from the transmission system to Maple Valley's local distribution system at two distribution substations located at Pipe Lake and Lake Wilderness. Power also comes from substations located in Pierce County and unincorporated King County.
- Transmission Switching Stations
The only switching station serving Maple Valley is located in the Berrydale area. Switching stations are used to control and monitor power flow on 115kV lines in order to increase system reliability.
- Distribution Substations
Distribution substations transform voltages of 115kV or greater to lower voltages of 12 or 34 kV.

Existing Level of Service

PSE foresees no immediate energy issues, and will continue to be able to supply energy to Maple Valley as the City grows.

Needs and Plans

As local and regional demand grows, additional distribution and transmission capacity will be needed. The existing 115 kV transmission lines are meeting the current loads. To meet future population demand within Maple Valley, PSE anticipates the need for new transmission lines and conversion of existing transmission lines to higher load. A new distribution substation may also be needed within the Maple Valley area.

Natural Gas

PSE provides natural gas to Maple Valley and surrounding communities through a network of interconnecting high pressure mains and distribution mains. PSE operates under a franchise agreement with the City that allows PSE to locate facilities within the public street rights-of-way.



Natural gas is provided to PSE by the Northwest Pipeline Corporation which operates a system of high pressure mains extending from Canada to New Mexico.

- Distribution Mains
PSE currently has approximately 22 miles of distribution mains serving Maple Valley within the City limits. One 6-inch main runs alongside Kent-Kangley Road, and another 6-inch main runs along Maple Valley Highway - Distribution mains are fed from District regulators. These are typically 6-inch and smaller diameter lines usually constructed of polyethylene.
- Gas Supply Mains
Gas supply mains are larger in diameter (6-inch and over), and designed to operate at higher pressure to deliver natural gas from the supply source to pressure reducing stations. PSE has no supply mains in Maple Valley.
- Pressure Reducing Stations
These are located at various locations throughout the system to reduce supply main pressure to a standard distribution operating pressure of approximately 60 psi (pounds per square inch). PSE has no pressure reducing stations in Maple Valley.

Level of Service Standards

The capacity of the system is primarily constrained by the volume of gas entering the network. The minimum pressure at which gas can be delivered is 15 psi. According to PSE, the average house using natural gas for both heat and hot water consumes about 1,000 therms per year. Given that 10 therms equal approximately one “mcf” of gas (or one thousand cubic feet), then 1,000 therms per house equals approximately 100,000 cubic feet of gas per year per house.

When planning the size of new gas mains, PSE uses a model which assumes all new households will use natural gas. This is because 99 percent of new houses constructed, where builders have the choice, use natural gas. Extension of service (typically conversion) is based on request and the results of a market analysis to determine if revenues from an extension will offset the cost of construction.

Needs and Plans

PSE had over 2,000 gas customers in the City of Maple Valley in 1998. Based on growth trends, PSE anticipates in excess of 3,000 customers in the future. The existing system is capable of supplying approximately 8,000 natural gas customers in the Maple Valley area.

Gas availability does not appear to be an issue during the next 20 years. PSE does not anticipate new facilities within the City of Maple Valley over the next 20 years with the exception of one main that may need to be installed to meet the new demands of Black Diamond’s proposed developments. This would be a 6-inch or 8-inch High Pressure Supply Main installed in the south end of Maple Valley near Auburn-Black Diamond Road and 224th Avenue SE.

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Potential methods for increasing supply to a particular area include replacement of the lines, looping, installing parallel lines, and inserting higher pressure lines into greater diameter but lower pressure mains. Three types of construction anticipated in the Maple Valley area include:

- New installation to increase capacity of existing customers or conversions from an alternate fuel.
- Main replacement projects to improve maintenance and system reliability.
- Replacement or relocation of facilities due to municipal and State projects.

Changes to federal law over the last two decades were designed to increase competition among energy sources by encouraging the development of new natural gas resources and the development of nationwide transmission pipelines. Almost all new homes use natural gas for heat. Facility technology for electricity transmission may change in the future in response to the need to create more efficient facilities and in response to various electromagnetic field and health concerns. Utility policies should be updated in the future to take into consideration changes in technology, facilities, and services.

TELECOMMUNICATIONS

As telecommunication technologies have evolved, convergence of these technologies has occurred, resulting in multiple communication services migrating into consolidated networks. This typically involves the convergence of previously distinct media, such as telephone, video, and data communications being transmitted over fiber optic or other infrastructure. This section describes both the current infrastructure used to provide telecommunication services in Maple Valley, as well as future services and facilities (as they can best be described now, given the rapid changes in how telecommunication services are provided and regulated).

Telephone**Existing Telephone Services and Facilities**

Local telephone service in Maple Valley (i.e. Public Switched Telephone Network [PSTN]) is provided by Century Link. The City does not have franchise agreements with CenturyLink or Frontier for local telephone service.

In addition to the PSTN telephone service provided in Maple Valley, Voice over Internet Protocol (VoIP) telephone service, also known as digital telephone service, is locally available. This service is provided by Comcast, which provides service throughout the entire city and CenturyLink (through their Digital Subscriber Line [DSL] internet service).

PSTN telephone service. VoIP telephone uses technology that allows phone calls to be made over an IP network, such as the Internet.

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Finally, mobile (cellular) telephone phone services are widely available in Maple Valley and are operated by many different cellular networks, including Verizon Wireless, AT&T Mobility, Sprint Nextel, and T-Mobile USA, among others. Mobile telephones make and receive telephone calls over a radio link by connecting to a cellular network provided by a mobile phone operator, allowing access to the public telephone network. All of Maple Valley is serviced by multiple cellular networks, although some areas do not have reliable access to cellular networks.

Future Telephone Services and Facilities

WUTC regulations require CenturyLink to provide adequate PTSN telecommunications service on-demand, and Section 480-120-086 of the Washington Administrative Code (WAC) requires CenturyLink to maintain adequate personnel and equipment to handle reasonable demand and traffic. Because CenturyLink provides service on demand, there are no limits to future capacity. Additionally, VoIP telephone service should only be restricted by bandwidth constraints on fiber optic networks that provide this digital service.

Cable Television Service**Existing Cable Television Service**

Land-line Cable Television service is provided in the entire city by Comcast. The City maintains two franchise agreements with Comcast for use of the City's rights-of-way to maintain and operate the cable network. Comcast's franchises for Maple Valley expires on July 15, 2016 (Ordinance No. O-11-448) and September 26, 2016 (Ordinance No. O-11-469 for the Maple Ridge Annexation area). The City is also served by two satellite cable television providers, i.e. Dish Network and Direct TV, depending on the geography and satellite line-of-site access of individual properties.

Future Cable Television and Broadband Services and Facilities

Although the demand for cable television is likely to continue to increase as population grows, access to cable television in Maple Valley is pervasive, and thus, growth in cable subscribers is likely to increase at the same pace as population growth. However, the demand for broadband services, whether they be cable television, VoIP telephone or data/internet services, is likely to continue to grow as networks are bolstered with additional bandwidth. This growth will most likely occur relative to data/internet service, as more content become accessible online, and as we continue to communicate and interact online. These broadband services can be provided over fiber optic networks, cable networks or DSL telephone networks.

Fiber Optic Facilities

The City maintains a franchise agreement with Integra Telecom (Electric Lightwave) for their fiber optic data network in Maple Valley. The fiber optic network passes through Maple Valley on SR 169 and is intended to primarily serve commercial or institutional users. Currently, very few end users are in the City.



Element 8

UTILITIES

Support Analysis

Given that the network utilizes City streets and rights-of-way, a franchise agreement was approved on April 20, 1998 (Resolution No. R-98-064). The franchise period is for a ten years and provides for two automatic ten-year extensions, unless a ninety day notice of termination is issued.



GOALS & POLICIES

The Utilities Element of the Comprehensive Plan provides Maple Valley an opportunity to coordinate with utility companies in meeting future service needs efficiently, while minimizing negative impacts on the natural and built environment. This section sets forth goals and policies to maximize this process of coordination between the provision of utilities and the City's Plans for future growth. The goals and policies below help the City to balance the needs of the industry with other responsibilities, including bringing the providers into compliance with due process, ensuring consistency with this Comprehensive Plan, addressing aesthetic impacts, protecting the natural environment, providing energy conservation measures and alternatives, and controlling the disruption of installations through Plan schedule coordination.

Goal UT-1: Facilitate, support, and/or provide citywide utility services that are:

- Consistent, safe, reliable, and equitable.
- Technologically innovative, environmentally sensitive, and energy efficient.
- Sited with consideration for location and aesthetic.
- Fiscally sustainable.

- Policies:**
- UT-P1.1** No public and private utilities may operate within the City of Maple Valley without an approved franchise agreement or interlocal agreement.
 - UT-P1.2** Encourage the design, siting, construction, operation, and relocation or closure of all utility systems in a manner that:
 - Is cost effective.
 - Minimizes and mitigates impacts on adjacent land uses.
 - Is environmentally sensitive.
 - Is appropriate to the location and need.
 - UT-P1.3** Undergrounding of utility distribution lines, with the exception of high voltage electrical transmission lines, shall be required in accordance approved franchise agreements and tariffs approved by the Washington State Utilities and Transportation Commission.
 - UT-P1.4** Encourage the co-location or joint use of trenches, conduits, or poles so that utilities may encourage expansion, maintenance, undergrounding, and upgrading facilities with the least amount of disruption to the community or of service delivery.

SEWER AND WATER

- Policies:**
- UT-P1.5** In coordination with the Soos Creek Water and Sewer District, the Cedar River Water and Sewer District, and the Covington Water District, extend



UTILITIES

Goals & Policies

- sewer and water services to meet the future land use needs and GMA concurrency requirements.
- UT-P1.6** The City of Maple Valley shall require all new subdivisions (including short plats) to connect to public sewer and water systems, where available.
- UT-P1.7** The City of Maple Valley shall support the efforts of applicable agencies and special purpose water district programs to conserve and minimize water usage.
- UT-P1.8** Existing on-site wells and septic systems may continue to serve existing residents as long as they are properly functioning, well maintained, and meet King County Health Department requirements. Future connections to public water or sewer facilities, where required by King County Health Department, should be done in coordination with the Soos Creek Water and Sewer District, the Cedar River Water and Sewer District, and the Covington Water District, as appropriate.
- UT-P1.9** New development shall avoid or mitigate adverse impacts to functioning potable water or septic systems.

ELECTRIC AND GAS

- Policies:**
- UT-P1.10** Where found to be safe, the City of Maple Valley shall promote open space preservation or recreational use of utility corridors, such as trails, sport courts and similar activities.
- UT-P1.11** The City of Maple Valley shall encourage utility providers to comply with applicable state regulations for tree trimming and planting, such as the planting of appropriate varieties of trees in the vicinity of power lines.
- UT-P1.12** Promote the undergrounding of new and existing electric distribution lines, where physically and financially feasible, as streets are improved and/or areas are redeveloped, based on coordination with local utilities.

TELECOMMUNICATION

- Policies:**
- UT-P1.13** The City of Maple Valley shall encourage multi-family, commercial and industrial developers to provide for common cable or satellite signal receiving facilities as a part of an initial building and site design and to explore joint use of such facilities among neighboring properties.
- UT-P1.14** The City of Maple Valley shall encourage cellular/wireless service providers to co-locate cellular communication antennas when new telecommunications facilities (such as monopoles or towers) are proposed, and to explore joint use of such facilities in order to reflect sensitivity to neighborhood character and reduce potential aesthetic impacts.
- UT-P1.15** The City of Maple Valley shall encourage telecommunication providers to supply the most current technologies.



UTILITIES

Goals & Policies

SOLID WASTE

- Policies:**
- UT-P1.16** Monitor solid waste collection providers for adequacy of service and compliance with service contracts.
 - UT-P1.17** Support recycling and waste reduction efforts throughout the community.



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APPENDIX A

SUMMARY OF SIX-YEAR CAPITAL FACILITY COSTS & FUNDING SOURCES

This appendix summarizes the capital cost and revenue sources projected over the next six years for the capital facilities and public services identified in the Comprehensive Plan.

The City of Maple Valley uses three of the five governmental fund types and both of the proprietary fund types. The City of Maple Valley does not use the fiduciary fund type. The governmental fund types used by the City of Maple Valley are: the general fund, the special revenue fund, and the capital projects fund. The proprietary fund types used by the City are the enterprise fund and the internal service fund.

General Fund

The General Fund is the chief operating fund of a state or local government. Generally Accepted Accounting Principles (GAAP) prescribe that the General Fund be used “to account for all financial resources except those required to be accounted for in another fund.” That is, it is presumed that all of a government’s activities are reported in the General Fund unless there is a compelling reason to report an activity in some other fund type¹. The City of Maple Valley uses the General Fund to account for all unrestricted revenue and all operating expenditures not accounted for in a proprietary or special revenue fund. The General Fund receives transfers from proprietary funds to pay for appropriate operating expenditures. The General Fund makes transfers to the capital project fund to provide resources to fund capital expenditures.

Special Revenue Funds

Special revenue funds are used to account for revenue sources that are set-aside for a specific purpose. Special revenue funds are established in the City of Maple Valley to provide distinct accountability. The City of Maple Valley uses the following special revenue funds:

- **Transportation Development Fund** – to account for transportation impact fees and contributions from developers restricted for street capital improvements,
- **Park Development Fund** – to account for special property tax levies, park impact fees, and contributions from developers restricted for park capital improvements,
- **Real Estate Excise Tax Fund** – to account for real estate excise taxes restricted for capital improvements.



APPENDIX A

- **Drug Seizure Fund** – to account for the seizure of cash and other assets from drug related police activity, and related expenses.
- **Bond Proceeds Fund** – to account for the proceeds of councilmanic and voted bond issues.
- **Transportation Benefit District Fund** – to account for receipt of vehicle license fees used for transportation infrastructure improvements. An agency fund reported in the financial statements and budget as a Special Revenue Fund.

Capital Projects Funds

Capital projects funds are used to account for major capital acquisitions and construction projects. Capital activities are accounted for separately from operating activities to help avoid distortion of financial resource trend information that can occur when operating and capital activities are mixed. The City of Maple Valley has one **Capital Project Fund** that summarizes the individual tracking of revenue and expenditure for each individual capital project. The individual capital projects are funded with grants, direct developer contributions, state infrastructure loans, and transfers from special revenue funds.

Enterprise Funds

Enterprise funds may be used to report any activity for which a fee is charged to external users. Enterprise funds are required if debt that is backed solely by enterprise fund fees is issued, or if there is a legal requirement or policy decision to recover all direct costs. The City of Maple Valley has two enterprise funds, the **Surface Water Management Fund** and the **Lake Wilderness Golf Course Fund**. The Surface Water Management Fund accounts for surface water management charges and pays operating and capital expenses. A policy decision has been made to recover all direct costs. The Lake Wilderness Golf Course Fund accounts for the revenues and expenses of the Lake Wilderness Golf Course acquired on November 30, 2006 to save the property from the threat of development.

Internal Service Funds

Internal service funds are used to account for centralized services, which are then allocated within the government. The City of Maple Valley uses the **Vehicle Rental Fund** to account for the operation of the City's vehicle fleet; and the **Central Services Fund**, to account for liability and property insurance, building services, office services and data processing. The City of Maple Valley uses the **Unemployment Trust Fund** to account for unemployment insurance.



APPENDIX A

Maintaining a balance between projected revenue sources and the demand for capital facilities and public services is a key tenet of the CIP and is required by the GMA. Projections of revenue sources beyond one to two years, however, is problematic due to the volatility of the regional economy and the local real estate market. Changes in local, County, State and federal legislation also has a direct effect on local government revenue sources. This legislation is political in nature and cannot be forecast with certainty. In addition, many funding sources such as grants and loans are not available on a consistent basis, are competitive in nature and cannot be reliably forecast.

To achieve coordinated Planning for public facilities consistent with available funding sources, however, the City's annual budget adoption process does anticipate future revenue generation and includes an updated one- and five-year forward financial forecast for the City. This total six-year financial forecast of anticipated revenue is integral to the annual update to the six-year CIP required by the GMA. It is based on conservative assumptions of revenue growth and is the mechanism to ensure that a balance between the expected revenues and long range need for capital improvement projects is maintained. The six-year financial forecast is completed as a component of the City's annual budget. It is adopted by reference and made a part of this Comprehensive Plan and CIP. Please refer to the annual City Budget for more information.

If funding sources were to fall short of meeting the projected CIP needs (based on adopted levels of service standards and forecasted growth) over the course of the planning period, the Comprehensive Plan contains policies to require that adjustments be made to the level of service standards, land use element, or both to achieve a balance between funding capacities and needed facilities.

City of Maple Valley

CAPITAL IMPROVEMENT PROGRAM (2016- 2021)

PROGRAM / PROJECT DESCRIPTION	Funding	2016	2017	2018	2019	2020	2021	TOTAL
SURFACE WATER MANAGEMENT PROGRAM								
S10 - Water Quality Retrofits	SWM, G	50	50	50	50	50	50	300
S12 - Misc. Drainage Improvements	SWM, G	250	250	250	250	250	250	1,500
SUB-TOTAL		300	300	300	300	300	300	1,800
TRANSPORTATION PROGRAM								
T23 - Annual Asphalt Overlay	TBD	300	25	300	300	300	300	1,525
T24 - Misc. Street Improvements	SF	100	100	100	100	100	100	600
T27 - Non-motorized Plan Implementation	SF, G	0	0	0	200	0	300	500
T28b - Witte Rd (SE 249th St - SE 256th Pl)	TF, REET, SWM,TBD, G	450	2,800	0	0	0	0	3,250
T28c - Witte Rd (222nd SE to SR 516)	TF, REET, SWM,TBD, G	0	0	300	2,200	0	0	2,500
T33a - SE 276th (240th SE - SR 169)	TF	95	0	0	0	0	0	95
279th)	TF, P	140	0	0	0	0	0	140
T36 - SR 169 Widening (228th - 244th)	TF,G	0	0	595	1,905	0	0	2,500
T38 - SE 216th(SR 516 - SE 283rd)	TF, SWM, G	1,740	0	0	0	0	0	1,740
T39 - SR 169 Widening (Witte - SE 240th)	TF, REET, SWM,TBD, G	0	1,150	5,200	0	0	0	6,350
SUB-TOTAL		2,825	4,075	6,495	4,705	400	700	19,200
PARKS, RECREATION & CULTURAL RESOURCES								
Lake Wilderness Park								
Signage & wayfinding	GF, REET		20					20
Play Equipment upgrade	GF, REET		60					60
Additional parking	PIF, REET G, U		300					300
Arboretum phase	B			2,200				2,200
Swim beach phase	PIF, REET, G, U		2,000					2,000
Lodge repairs	GF, REET			50				50
Lodge phase	B						1,000	1,000
Summit Park								0
Park Construction	B	5,000	5,000					10,000
Fernwood Natural Area								0
Vegetation management plan, Improve trails	GF	5	3	1				9
wetland stewardship: Restoration plantings								
Shelter/overlook & environmental interpretive panels	PIF, REET, G			15				15
216th Avenue Park								0
Site evaluation/assessment	GF							0
Park master plan concept	PIF, REET	10						10
Henry's Switch Park								0
Site evaluation/assessment	GF	5						5
Park master plan concept	GF		10					10
Systemwide Renovation								0
Repair, Renovation & ADA Compliance audits and upgrades	GF	10	5	5	5			25
Neighborhood Greenway Plan								0
Develop a final neighborhood greenways plan with a prioritized implementation tool kit	REET, GF							0
Implement Neighborhood Greenway PlanImprovements	REET, GF, G	5	5	5	5	5		25
Lake Wilderness Trail Access improvements								0
Create LWT Access improvements at SE 260th street adjacent to the legacy site	PIF, REET, G				10			10
Community Park Acquisition								0
Acquire 20-40 acres (Gap Area #4)	B							0
Neighborhood Park Evaluation								0
Assess gap opportunities for either purchasing property or converting existing stormwater properties to parks	PIF, G	10	10	10				30
Lake Wilderness Golf Course								0
Infrastructure improvements	B				1,000			1,000
SUB-TOTAL		5,045	7,413	2,286	1,020	5	1,000	16,769
COMMUNITY FACILITIES PROGRAM								
C1 - Enhanced Youth, Community & Senior	CIP	0	0	2,600	7,600	0	0	10,200
F3 - Maple Valley Legacy Project	CIP	50	100	100	100	0	0	350
SUB-TOTAL		50	100	2,700	7,700	0	0	10,550
DEBT SERVICE PROGRAM								
D4 -2004 Infrastructure Loan Debt		194	193	192	191	190	189	1,149
D6 - 2014 Councilmanic Park Bond		181	181	181	180	180	179	1,082
D7 - 2015 Bond Refinancing		516	517	519	520	520	0	2,591
SUB-TOTAL		890	891	891	891	890	368	4,822
TOTAL PROJECTS		9,060	12,679	9,972	6,916	1,595	2,368	42,591

Funding Sources Key

GF - General Fund	U - To Be Determined	B -Bonds (Council & Voter Approved)
REET - Real Estate Excise Tax	TF - Transportation Development Fund	P - Private funds; Dedications; Donations, Developer Contribution
SWM - Surface Water Management Fund	PIF - Park Impact Fees	
TBD - Transportation Benefit Districe Fund	CIP - Capital Improvement Fund	
SF - Street Fund	G - Grants	

CAPITAL FACILITIES PLAN

2014 to 2019

**Tahoma School District
No. 409**

Adopted: July 29, 2014

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TAHOMA SCHOOL DISTRICT NO. 409
2014
CAPITAL FACILITIES PLAN - UPDATE

Summary:

In accordance with King County Code 21A.43, this update has been prepared to reflect current conditions in facility usage and needs. District Board Policy 9100 requires that "changing demographic factors shall be monitored in order that students' needs are met when the future becomes the present." An ongoing Facilities Planning Committee reviews facility availability and demographics to place students in an environment that meets the educational needs of the students and that is consistent with the educational philosophy and the instructional goals of the District.

Following a period of modest growth, the District has recently experienced healthy enrollment gains in each of the last six years. In 2007, the total student headcount was 7,155 and in October 2013 the count is 7,651 (7,301 FTE), an increase of 4.8 percent. Current enrollment, along with projections presented herein, indicates that the enrollment growth will continue over the next six years.

Much of the District's growth is occurring within the City of Maple Valley. There is also ongoing, though limited, development in other areas of unincorporated area of King County that are located within the District. At this time, development plans are unknown for the Summit Pit area of the District which has been annexed into the City of Maple Valley. At one time, a large residential development of 1,500 units was planned. It has been the District's recent experience that new houses being built in the District tend to yield the largest number of students five or six years after the initial occupancy.

The bond measure would pay for the following changes:

- Build a new Tahoma High School for grades 9-12, the alignment used by most area high schools.
- Remodel Lake Wilderness Elementary School to achieve enrollment of 550 students.
- Realign grade levels at four of the district's eight schools to create two middle schools for grades 6-8 and six elementary schools, K-5.
- Greatly reduce or eliminate the use of portable (temporary) classrooms at all sites.
- Safety and security improvements to all schools.
- Create a regional learning center at the new Tahoma High School that would offer more education choices to high school students during the day and evening classes to the community through partnerships with Green River Community College and Renton Technical College.

SIX-YEAR ENROLLMENT PROJECTION

The District uses the enrollment projections provided by the Washington State Office of Superintendent of Public Instruction (OSPI). The projections are based on the "Cohort Survival Method" which computes progressive ratios for each grade level and averages those ratios over the past five years. The average ratio is then multiplied by the actual current year's enrollment using October headcount for each grade to project the enrollment in the next grade for the next year. The Cohort Survival Method uses past enrollment indicators to predict future growth, however, and does not account for anticipated growth due to new residential development. Therefore, the Cohort Survival Method projections are to be considered highly conservative. In addition, while long-range projections are less reliable than short range, the District will continue to adjust for changes from year to year.

Calculations based on the 2013 enrollment data indicate that growth will consistently increase over the next six years. Current enrollment of 7,301 (October 2013 FTE) is projected to increase to 8,462 (FTE) in 2019 – an increase of 15.9 percent. All three grade levels will experience enrollment growth.

The District anticipates that, in addition to the enrollment increases predicted by the Cohort Survival Method, enrollment increases will occur due to residential development in the District. In particular, large residential development in the Summit Pit area development will only add to the enrollment projections contained in this Plan. The District intends to monitor the future activities related to this land and will include updated information in future updates to this Plan.

Appendix A includes the District's enrollment history and six-year enrollment projections.

STANDARD OF SERVICE AND AVAILABILITY OF SPACE

The Standard of Service identified by the Tahoma School District in keeping with Board Policy 9100 is to "...accommodate the educational needs of students and be consistent with the educational philosophy and instructional goals of the District." State legislation and contract agreement with the Tahoma Education Association identify the Certificated staff mandate for maximum classroom size. Enrollment and spaces occupied by the Russell Ridge Center are not included in the Standard of Service and Available Space Calculations.

Standards of Service for Elementary School Students:

1. Class size for grades K-5 averages 24.
2. Special Education is delivered through both pull-out services and self-contained classrooms at all elementary sites.
3. All students are provided music and physical education in separate classrooms.
4. Computer labs are available in each school.
5. Gifted education is offered as either pullout or self-contained classes (average class size is 22) at Shadow Lake Elementary.
6. Remedial services are offered as pull-out models and utilize space available in each school.
7. The District has/will relocate students of one grade level to facilities of another grade level to take advantage of available excess capacity. The District will continue such actions as necessary.

Standards of Service for Senior and Middle School Students:

1. Class sizes for both the middle average 24 and class sizes for the senior high average 29.
2. Self-contained special education classes are offered in all buildings.
3. Computer labs are offered in all buildings.
4. Advanced vocational classes have less than average number of enrollees.
5. Classes are utilized during the day for planning and student consultation.
6. Certain specialty classes, such as typing, music, and certain vocational courses, are not conducive for scheduling general classes.
7. The District has/will relocate students of one grade level to facilities of another grade level to take advantage of available excess capacity. The District will continue such actions as necessary.

At this time, enrollment figures show the District has facility capacity for the following schools:

Lake Wilderness	K-5	Is over capacity by 106 students in permanent facilities and 50 students under capacity when considering relocatable facilities.
Shadow Lake	K-5	Is over capacity by 37 students in permanent facilities and 35 students under capacity when considering relocatable facilities.
Rock Creek	K-5	Is over capacity by 127 students in permanent facilities and 89 under capacity when considering relocatable facilities
Glacier Park	K-5	Is over capacity by 156 students in permanent facilities and 36 students under capacity when considering relocatable facilities.
Cedar River	6-7	Is over capacity by 70 students in permanent facilities and is 85 students under capacity when considering relocatable facilities.
Tahoma Middle	6-7	Is under capacity by 33 students in permanent facilities and is 91 students under capacity when considering relocatable facilities.
Tahoma Junior High	8-9	Is over capacity by 233 students in permanent facilities and under capacity by 74 students when considering relocatable facilities.
High School	10-12	Is over capacity by 392 students in permanent facilities and under capacity by 201 students when considering relocatable facilities.

The District also operates an alternative school, Russell Ridge Center (K-12). Because of limited facilities, enrollment will not exceed the predetermined limits of 120 for Russell Ridge Center. Because of these District limits, neither the enrollment nor capacity of Russell Ridge Center are considered in the calculations and conclusions in this document.

INVENTORY OF PERMANENT FACILITIES

Instructional Facilities

			Permanent Capacity	Temporary Capacity	October 13 FTE Enrollment
Lake Wilderness Elementary	K-5	24216 Witte Road SE Maple Valley, 98038	852	156	958
Shadow Lake Elementary	K-5	22620 Sweeney Road SE Maple Valley, 98038	504	72	541
Rock Creek Elementary	K-5	25700 Maple Vly-Black Dmd Rd SE Maple Valley, 98038	708	216	835
Glacier Park Elementary	K-5	23700 SE 280 th Maple Valley, 98038	708	192	864
Cedar River Middle School	6-7	22516 Sweeney Road SE Maple Valley, 98038	525	155	595
Tahoma Middle School	6-7	24425 S.E. 216 th Maple Valley, 98038	629	58	596
Tahoma Junior High	8-9	25600 SE Summit-Landsburg Rd. Ravensdale, 98051	981	307	1214
Tahoma High School	10-12	18200 SE 240th Kent, 98042	1,247	593	1639
Russell Ridge (Alternative School)	K-12	26615 Sweeney Road SE Maple Valley, 98038	120		61

Support Facilities

Central Services Center	25720 SR 169 Maple Valley, 98038
Transportation and Maintenance	22050 SE Petrovitsky Road Maple Valley, 98038
Central Kitchen	25638 SR 169 Maple Valley, 98038

NOTE: Russell Ridge Center is not included in "Projected Enrollment and Capacity" because enrollment limits are established by the District and new students come from waiting lists.

PROJECTED ENROLLMENT AND CAPACITY

In 2005, the District completed its construction and remodeling program that began with passage of the 1997 construction bond measure. The \$45.5 million bond measure, combined with state matching funds and local construction impact fees, paid for: Tahoma Senior High School remodeling and expansion; Tahoma Junior High construction; Shadow Lake Elementary School remodeling and expansion; Cedar River Middle School expansion; and Tahoma Middle School renovation.

The District began a transition during the 2001-2002 school year to a District-wide grade reconfiguration of K-5, 6-7, 8-9 and 10-12. When the completion of the modernization of the old Tahoma Junior High School in 2004, that school re-opened as a middle school and all of the District's elementary schools now serve grades K-5. This configuration helped to create additional capacity at the elementary (K-5) level.

On November 5th, the District passed a \$195 million bond measure

The following charts on projected enrollment and capacity detail the available space and the projected enrollment for the next six years. The District is in need of capacity at all grade levels. Large classes and the utilization of non-traditional classroom space will continue until additional permanent space and/or facilities become available. Continued building of single family residences in the District will cause the need to build a new high school to accommodate new 9-12 grade configuration. Reconfiguration will also occur at the elementary and middle school grade levels to utilize existing school facilities. Relocatable capacity may also be added at all grade levels. The District is also purchasing land for school site. Note that these improvements are needed to address immediate growth needs and may not include additional capacity that may be necessary to serve development in the Summit Pit area.

The District will continue to use relocatable facilities until sufficient permanent space is constructed. Note that the District uses relocatable capacity as a temporary remedy only.

PROJECTED ENROLLMENT AND CAPACITY

Elementary (K-5)	2013	2014	2015	2016	2017	2018	2019
Permanent Program Capacity	2,772	2,772	2,772	2,772	3,550***	3,550***	3,550***
Additional Relocatables							
Total Relocatable Capacity	408	408	408	408	408	410	410
Total Capacity	3,180	3,180	3,180	3,180	3,958	3,960	3,960
Projected Enrollment	**3,503	*3,533	*3,633	*3,699	*3,794	*3,857	*3,919
Available Capacity (Temp. & Perm. Facilities)	(323)	(353)	(453)	(519)	164	103	(41)
Available Capacity (Permanent Facilities)	(731)	(761)	(861)	(927)	(244)	(307)	(451)

*Projected FTE Enrollment - OSPI

**Actual Oct. 1, 2013 FTE enrollment – OSPI

***New configuration

and completion of Lake Wilderness Project

Middle/Junior High School (6-9)	2013	2014	2015	2016	2017	2018	2019
Permanent Program Capacity	2,135	2,135	2,135	2,135	2,228***	2,228***	2,228***
Middle/Junior High Addition							
Total Permanent Capacity	2,135	2,135	2,135	2,135	2,228	2,228	2,228
Additional Relocatables							
Total Relocatable Capacity	520	520	520	520	520	520	520
Total Capacity	2,655	2,655	2,655	2,655	2,748	2,748	2,748
Projected Enrollment	**2,429	*2,530	*2,528	*2,575	*2,607	*2,626	*2,721
Available Capacity (Temp. & Perm. Facilities)	226	125	127	80	141	122	27
Available Capacity (Permanent Facilities)	(294)	(395)	(393)	(440)	(379)	(398)	(493)

*Projected FTE Enrollment - OSPI

**Actual Oct. 1, 2013 FTE enrollment - OSPI

***New configuration and completion of Lake Wilderness Project

High School (10-12)	2013	2014	2015	2016	2017	2018	2019
Permanent Program Capacity	1,247	1,247	1,247	1,247	2,351***	2,351***	2,351***
High School Addition							
Total Permanent Capacity	1,247	1,247	1,247	1,247	2,351	2,351	2,351
Additional Relocatables							
Total Relocatable Capacity	593	593	593	593	0	0	0
Total Capacity	1,840	1,840	1,840	1,840	2,351	2,351	2,351
Projected Enrollment	**1,680	*1,673	*1,694	*1,731	*2,474	*2,469	*2,514
Available Capacity (Temp. & Perm. Facilities)	160	167	146	109	579	523	529
Available Capacity (Permanent Facilities)	(433)	(426)	(447)	(484)	579	523	529

*Projected FTE Enrollment - OSPI

**Actual Oct. 1, 2013 FTE enrollment - OSPI

***New high school construction - changing configuration from grades 10-12 to 9-12

FACILITY NEEDS AND FINANCIAL PLAN

Needs Forecast:

The following charts summarize the District's proposed remodeling, expansion and new construction projects. In order to meet expected enrollment increases and to address other facility needs, the District is planning the following capacity projects: a new high school (grades 9-12) and rebuild of Lake Wilderness Elementary School. In addition, the District plans to reconfigure portables across District schools to relieve interim growth needs. Additional portables may be added in the District during the six years of this Plan. Finally, the District has purchased land for a new school site.

The District also plans non-capacity improvements at various schools throughout the District, as identified on the Finance Plan and described below:

- Lake Wilderness – rebuild – 550 kids – k-5 configuration
- Glacier Park Elementary: miscellaneous building upgrades. K-5 configuration
- Rock Creek Elementary: miscellaneous building upgrades. K-5 configuration
- Cedar River Middle School: miscellaneous building upgrades. K-5 reconfiguration
- Tahoma Middle School: miscellaneous building upgrades. K-5 reconfiguration
- Tahoma Junior High School: miscellaneous building upgrades. 6-8 reconfiguration
- Tahoma High School: miscellaneous building upgrades. 6-8 reconfiguration
- New high school construction: 9-12 configuration

These projects would be completed over the course of the six years of this Plan. The Financial Plan reflects costs based on current architectural projections and revenue based on the present District match ratio and impact fees projections.

FINANCE PLAN

Capacity Projects

Facility	Proposed Start Date	Proposed End Date	Location	Capacity Change	% of Facilities to Serve New Growth	Anticipated Source of Funds**	Site Cost*	Construction Cost**
Lake Wilderness Elementary Replacement (Net New Seats)	2015	2016	24216 Witte Road SE	550	100%	State Match, Bonds, Impact Fees	Previously purchased	\$14,000,000
New High School	2014	2016	Summit Pit	2351	100%	State Match, Bonds, Impact Fees	\$31,000,000	\$143,000,000
Land Purchase	2013	2014	40 acres -- location TBD		100%	Impact Fees, Capital Funds	\$9,000,000	\$9,000,000
TOTAL							\$40,000,000	\$166,000,000

Noncapacity Projects

Facility	Proposed Start Date	Proposed End Date	Location	Anticipated Source of Funds	Site Cost*	Construction Cost**
Rock Creek Elementary Improvements	2014	2016	25700 MV-Blk Diamond Rd SE	Bonds	Previously purchased	\$3,360,000
Glacier Park Elementary Improvements	2014	2016	23700 SE 280 th	Bonds	Previously purchased	\$2,160,000
Shadow Lake Elementary Improvements	2014	2016	22620 Sweeny Road SE	Bonds	Previously purchased	\$360,000
Cedar River Middle School Improvements	2015	2017	22516 Sweeney Road SE	Bonds	Previously Purchased	\$10,400,000
Tahoma Middle School Improvements	2015	2016	24425 SE 216th	Bonds	Previously Purchased	\$8,600,000
Tahoma Junior High Improvements	2014	2016	25600 SE Summit-Landsburg Rd	State Match, Bonds	Previously purchased	\$1,275,000
Tahoma High School Improvements	2015	2017	18200 SE 240th	State Match, Bonds	Previously purchased	\$6,100,000
TOTAL						\$32,255,000

* Previously purchased property paid from earlier bond issues unless otherwise noted.

** Site and Building cost estimates provided by DLR Group.

FEE CALCULATIONS

School Impact Fees Under the Washington State Growth Management Act

The Growth Management Act (GMA) authorizes jurisdictions to collect impact fees to supplement funding of additional public facilities needed to accommodate new development. Impact fees cannot be used for the operation, maintenance, repair, alteration, or replacement of existing capital facilities used to meet existing service demands.

Methodology and Variables Used to Calculate School Impact Fees

The Tahoma School District calculates school impact fees pursuant to the formula adopted by King County Ordinance No. 10162 and under the authority of Chapter 21A.43 of the King County Code and the Washington State Growth Management Act. The formula calculates fees for single family dwelling units and multi-family dwelling units.

Impact fees are calculated based on the District's cost per dwelling unit for capacity projects that will serve the student from new development (including, as applicable, the purchase of land for school sites, making site improvements, constructing schools and purchasing/installing portable facilities). As required under GMA, credits have also been applied for State Match Funds to be reimbursed to the District and property taxes to fund the projects that will be proposed for future bond measures. Assessed values for single and multi-family housing in the Tahoma School District were provided by the King County Assessor in February 2014.

The King County Ordinance includes a fifty (50) percent "discount rate," which operates to set the final fee at 50% of the calculated unfunded need.

Appendix B includes the District's fee calculation. Single Family Housing will yield a fee of \$6,774 and multi-family housing will yield a fee of \$3,184.

STUDENT FACTORS

The student factor (or student generation rate), a significant factor in determining impact fees, is the average number of students generated by each housing type—single-family and multiple-family housing. The student factors are indicated below.

The District was unable to obtain sufficient permit data to calculate its own student generation factors. In accordance with K.C.C. 21A.06.1260, the District has chosen to use the average student generation rate of neighboring school districts.

STUDENT FACTOR RATES

Single Family Dwelling Unit:

	Auburn	Issaquah	Kent	Lk. Wash	Average
Elementary	0.165	0.471	0.484	0.393	0.378
Middle	0.076	0.170	0.129	0.131	0.127
High	0.087	0.145	0.249	0.103	0.146
Total	0.328	0.786	0.862	0.627	0.651

Multi-Family Dwelling Unit:

	Auburn	Issaquah	Kent	Lk. Wash	Average
Elementary	0.223	0.165	0.324	0.055	0.192
Middle	0.091	0.052	0.066	0.017	0.057
High	0.092	0.051	0.118	0.012	0.068
Total	0.406	0.268	0.508	0.084	0.317

APPENDIX A – ENROLLMENT PROJECTIONS

STATE OF WASHINGTON
SUPERINTENDENT OF PUBLIC INSTRUCTION
SCHOOL CONSTRUCTION ASSISTANCE PROGRAM
REPORT 1049 - DETERMINATION OF PROJECTED ENROLLMENTS
SCHOOL YEAR 2013-2014

King/Tahoma (17409)

Grade	--- ACTUAL ENROLLMENTS ON OCTOBER 1st ---							--- PROJECTED ENROLLMENTS ---					
	2008	2009	2010	2011	2012	2013	AVERAGE % SURVIVAL	2014	2015	2016	2017	2018	2019
Kindergarten	498	465	503	493	525	540		542	553	564	575	585	596
Grade 1	528	553	493	550	571	588	110.84%	599	601	613	625	637	648
Grade 2	547	547	567	522	584	566	103.45%	608	620	622	634	647	659
Grade 3	560	571	562	588	548	603	103.81%	588	631	644	646	658	672
Grade 4	563	568	577	551	623	569	102.05%	615	600	644	657	659	671
Grade 5	539	561	588	583	573	637	102.08%	581	628	612	657	671	673
Grade 6	605	556	552	597	606	600	102.70%	554	597	645	629	675	689
K-6 Sub-Total	3,840	3,821	3,852	3,884	4,030	4,103		4,187	4,230	4,344	4,423	4,532	4,608
Grade 7	588	616	562	569	616	608	101.52%	609	664	606	655	639	685
Grade 8	601	580	641	577	582	624	102.47%	623	624	680	621	671	655
7-8 Sub-Total	1,189	1,196	1,203	1,146	1,198	1,232		1,232	1,288	1,286	1,276	1,310	1,340
Grade 9	575	646	595	640	597	597	103.18%	644	643	644	702	641	692
Grade 10	587	553	622	576	625	583	96.91%	579	624	623	624	580	621
Grade 11	553	582	532	561	538	569	93.99%	548	544	586	585	586	639
Grade 12	526	531	546	503	545	528	95.93%	546	526	523	562	562	562
9-12 Sub-Total	2,241	2,312	2,295	2,280	2,305	2,277		2,317	2,337	2,375	2,474	2,469	2,514
DISTRICT K-12 TOTAL	7,250	7,329	7,350	7,310	7,533	7,612		7,736	7,855	8,005	8,173	8,311	8,462

Notes: Specific subtotals on this report will be driven by District Grade spans.

School Facilities and Organization

Printed Dec 23, 2013

SCHOOL IMPACT FEE CALCULATIONS

DISTRICT Tahoma SD #409
YEAR 2014

School Site Acquisition Cost:

((Acres x Cost per Acre) / Facility Capacity) x Student Generation Factor

	Facility Acreage	Cost/ Acre	Facility Capacity	Student Factor SFR	Student Factor MFR	Cost/ SFR	Cost/ MFR
Elementary	20.00		0 600	0.378	0.192	\$0	\$0
Middle	35.00		0 800	0.127	0.057	\$0	\$0
High	35.00	257,143.00	2000	0.146	0.068	\$657	\$306
						\$657	\$306

School Construction Cost:

((Facility Cost / Facility Capacity) x Student Generation Factor) x (permanent / Total Sq Ft)

	%Perm/ Total Sq.Ft.	Facility Cost	Facility Capacity	Student Factor SFR	Student Factor MFR	Cost/ SFR	Cost/ MFR
Elementary	100.00%	\$14,000,000.00	550	0.378	0.192	\$9,622	\$4,887
Middle	0.00%		75	0.127	0.057	\$0	\$0
High	100.00%	\$143,000,000.00	2351	0.146	0.068	\$8,880	\$4,136
						\$18,502	\$9,023

Temporary Facility Cost:

((Facility Cost / Facility Capacity) x Student Generation Factor) x (Temporary / Total Square Feet)

	%Temp/ Total Sq.Ft.	Facility Cost	Facility Size	Student Factor SFR	Student Factor MFR	Cost/ SFR	Cost/ MFR
Elementary	0.00%	0	23	0.378	0.192	\$0	\$0
Middle	0.00%	0	26	0.127	0.057	\$0	\$0
High	0.00%	0	27	0.146	0.068	\$0	\$0
TOTAL						\$0	\$0

State Matching Credit:

Boeckh Index X SPI Square Footage X District Match % X Student Factor

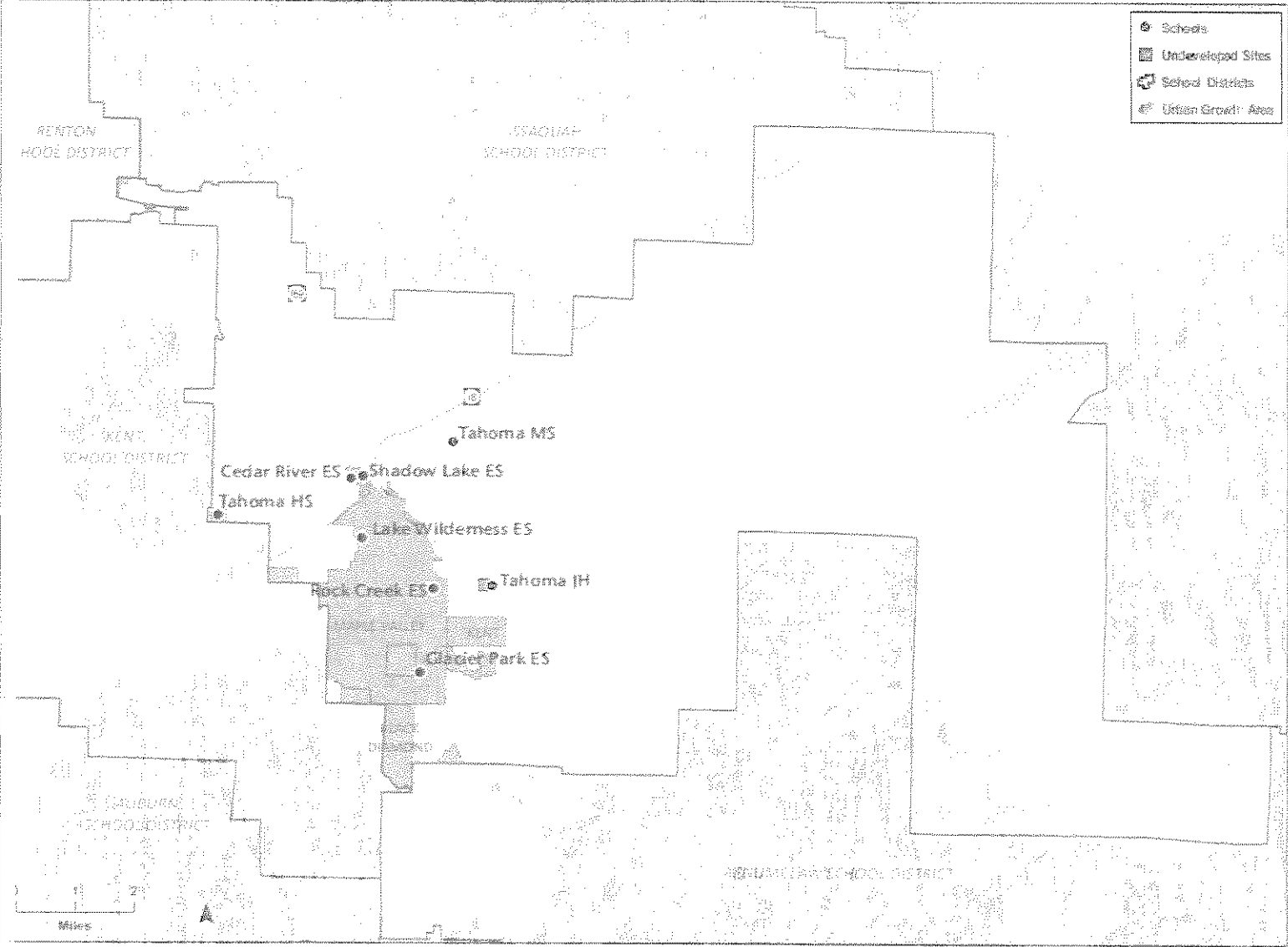
	Boeckh Index	SPI Footage	District Match %	Student Factor SFR	Student Factor MFR	Cost/ SFR	Cost/ MFR
Elementary	\$200.40	90	0.00%	0.378	0.192	\$0	\$0
Junior	\$200.40	117	0.00%	0.127	0.057	\$0	\$0
Sr. High	\$200.40	130	62.38%	0.146	0.068	\$2,373	\$1,105
TOTAL						\$2,373	\$1,105

Tax Payment Credit:

	SFR	MFR
Average Assessed Value	\$290,653.00	\$166,544.00
Capital Bond Interest Rate	4.38%	4.38%
Net Present Value of Average Dwelling	\$2,313,485.18	\$1,325,625.66
Years Amortized	10	10
Property Tax Levy Rate	\$1.40	\$1.40
Present Value of Revenue Stream	\$3,239	\$1,856

Fee Summary:		Single Family	Multi- Family
Site Acquisition Costs		\$657	\$306
Permanent Facility Cost		\$18,502	\$9,023
Temporary Facility Cost		\$0	\$0
State Match Credit		(\$2,373)	(\$1,105)
Tax Payment Credit		(\$3,239)	(\$1,856)
FEE (AS CALCULATED)		\$13,548	\$6,368
FEE (AS DISCOUNTED)		\$6,773.87	\$3,184
FEE (AS ADJUSTED BY DISTRICT)		\$6,774	\$3,184
FINAL FEE		\$6,774	\$3,184

Schools and Undeveloped Site in the Tahoma School District



June 2011



2014 – 2019

6 Year Capital Improvement Update



Maple Valley Fire & Life Safety

Six Year Capital Facilities & Equipment Plan

2014-2019

Maple Valley Fire & Life Safety

This Maple Valley Fire & Life Safety Capital Facilities & Equipment Plan was prepared and implemented through the help of the following individuals and organizations:

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Deputy Chief David O'Brien, Captain Terry Brown, Firefighter Kelley Jensen

Deployment Dynamics Group LLC

Larry Rabel, Managing Partner

Commissioners

Brian McGee, Position #1

Mike Scott, Position #2

Camille Walls, Position #3

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Bill VanRuff, Position #5

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Brad Doerflinger

July 2014

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1 Executive Summary

This Six-Year Capital Facilities Plan (the "Plan") has been prepared as an update and extension of the Maple Valley Fire & Life Safety (MVF&LS) 2011 – 2030 Master Capital Facilities and Equipment Plan (MCFEP) in compliance with the requirements of Washington's Growth Management Act Chapter 36.70A RCW and Maple Valley Municipal Code 16.70

This Six Year Plan update was prepared using data available through 2013 and is consistent with the long range 2011 to 2030 MVF&LS Capital Facility and Equipment Plan. This Plan is intended to provide an annual look at the progress toward funding and implementation of the 2011 - 2030 Capital Facility and Equipment Plan which was previously adopted by the City of Maple Valley in 2011. The goal of this plan is to forecast the next six years of capital facilities needs and establish an achievable funding plan that incrementally provides the resources necessary to maintain adequate service delivery prior to or concurrently with the impacts of development within the jurisdictions of Maple Valley and Maple Valley Fire & Life Safety.

The underlying premise of this document is that as the community continues to grow, additional resources will be required to adequately meet the growing demand for fire & life safety services. It is assumed that a direct relationship exists between population and demand for services which directly links to a need for resources.

For purposes of this plan, capital improvements are defined as real estate, structures or collective equipment purchases anticipated to have a cost over \$15,000 and an expected useful life of at least 5 years.

MVFLS is an independent special purpose district legally formed under Chapter 52 of the Washington Administrative Code that provides fire and rescue services to the District's 55 square miles of urban, suburban and rural area. Services provided are delivered 24 hours per day, 365 days per year through what is known as a "combination" type of fire service, meaning that both paid (48 firefighters and officers) and volunteer (30 firefighters and officers) are utilized to deliver services. Services delivered by MVFLS include; fire suppression, fire prevention and code enforcement, basic life support (BLS) in cooperation with King County Medic 1, and public education in fire prevention and life safety. The urban boundary set on July 6, 1992 remains largely the same in MVFLS. The current service area includes all of the City of Maple Valley as well as surrounding unincorporated areas of King County. Generally MVFLS's service area borders Issaquah to the north, the Cascade foothills to the east, the City of Covington to the west and Black Diamond to the south. Current 2010 population of MVFLS is 43,102¹

This Plan re-establishes the service level standards adopted by MVF&LS in the MCFEP and evaluates the existing and future fire service delivery capacity. Fire service capacity is evaluated upon the ability of current deployed resources to meet established levels of service with existing resources. Fire stations and fire apparatus are evaluated to determine capacity. A fire station with three apparatus bays and infrastructure and staffing to support three emergency response units has reserve capacity when only one unit is deployed from that station. Also, a fire resource that meets its

¹ Washington State Office of Financial Management, April 2013

level of service objectives and is reliably available for service at least as often as it is expected to meet its level of service objective also has reserve capacity. MVFLS's goal is to deliver service at the adopted level of service (LOS) 9 times out of 10 or at 90%.

Fire service capacity is also measured against future impacts of growth and the capacity that future growth will erode when built. The following pages will identify the capital needs that have been implemented since adoption of the MCFEP, evaluate historical performance to the adopted standards, project the need for additional resources over the next six years and identify the funding plan to implement the needed resources from 2014 – 2019.

2 Community Growth and Impacts of Growth 2014 – 2020

Between 2010 and 2013 the City of Maple Valley's population grew by more than 16% or 5.3% per year. Population grew from 20,480 in 2010 to 23,910² in April of 2013. Total population of MVF&LS between 2010 and 2013 grew from 39,460 to 43,002 for an overall growth rate of approximately 3% per year. Based upon this recent historical growth and continued development plans of Summit Place, growth within MVFLS will continue at approximately 3% each year placing additional burdens on the current MVFLS service delivery system.

Table 1 Six Year Growth Projections

Portion of MVFLS Service Area	Population 2010	Population 2013	Population 2020
City of Maple Valley	20,480	23,910	30,263
Unincorporated King County	18,980	19,192	20,173
Total	39,460	43,102	50,436

As a result of community growth, service area demand measured by total emergency responses has grown from 3,792 in 2010 to 4,042 in 2013. Existing capacity of response resources continues to diminish within the service area of MVF&LS and the City of Maple Valley as a result of the growth experienced between 2010 and 2013 (see Table 1).

3 Current Capital Assets and Resources

Capital resources for MVFLS consist of fire stations, fire apparatus (vehicles used for fire and rescue work), staff vehicles and the related equipment, tools and associated personal protection equipment needed to safely and legally provide fire and rescue services. Current inventories of these resources are listed in Tables 2, 3, and 4 below.

3.1 Fire Stations

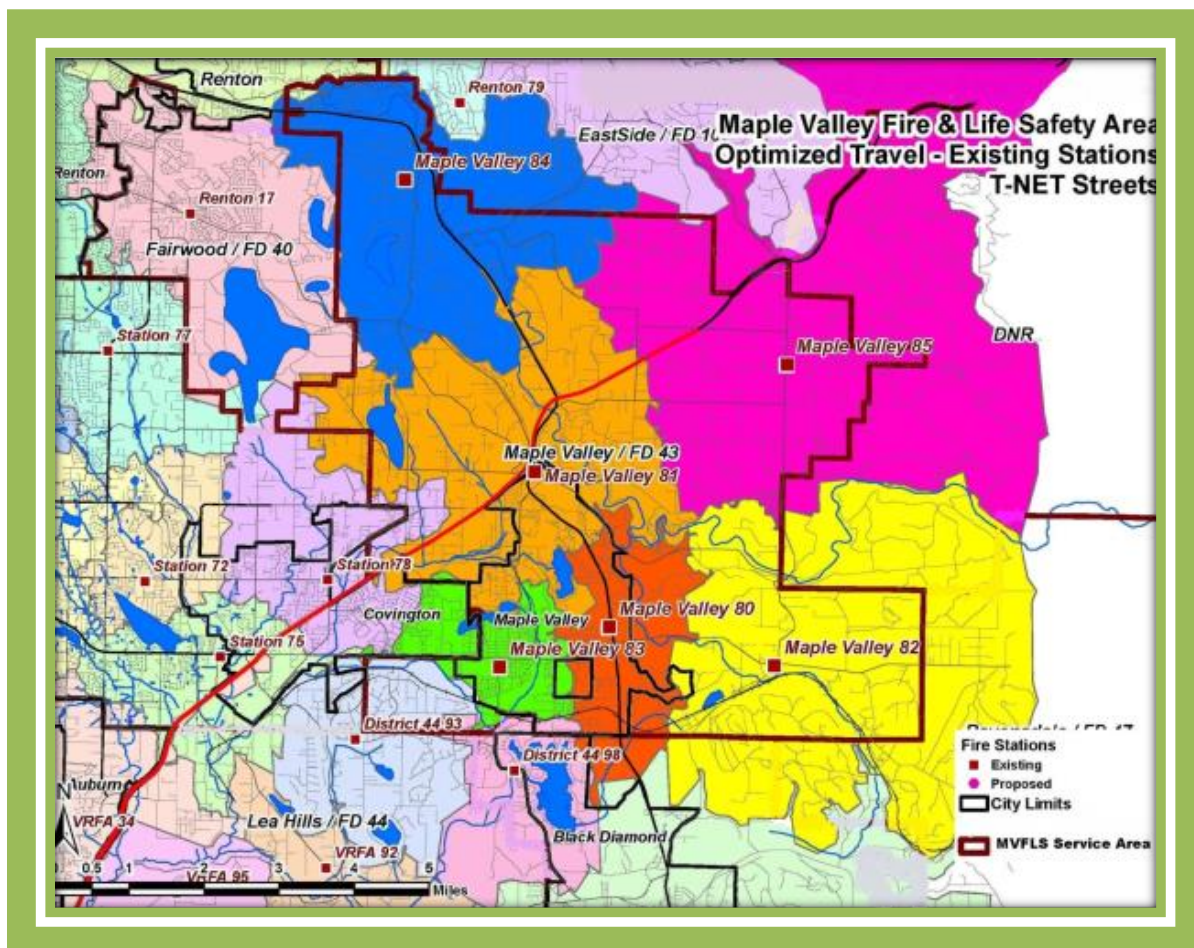
Emergency services are provided from six fire stations located throughout the service area as identified in Table 2 and shown on the map in Exhibit 1. On average the existing six fire stations in operation are 34 years old with an average square footage of 5,076.

² From Washington State Office of Financial Management
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Table 2: Fire Station Inventory

Fire Station	Location	Size	Acquired	Capacity	Condition	Acres	Dorm Rooms
Career Stations							
Station 80	23775 SE 264th Street	8,985	2002	3.5 bays	Good	0.87	6
Station 81	22225 (22300) SE 231st Street	10,821	1982	7 bays	Fair	1.78	8
Station 83	27250 (27260) 216th Ave SE	2,852	1965	1.5 bays	Good	0.91	4
Sub-total		22,658		12		3.56	18
Volunteer Stations							
Station 82	27519 (27509) Kent Kangley Rd	2,310	1983	2 bays	Fair	1.49	4
Station 84	16855 194th Ave SE	3,000	1965	2 bays	Fair	0.42	4
Station 85	27605 SE 208 th	2,240	1983	1.5 bays	Fair	1.07	4
Future 87	24416 SE 216th St.	Land only		0	N/A	3.51	0
Sub-Total		11,694		9.5		16.34	12
Total		34,352		21.5		19.90	30

Exhibit 1: MVFLS Service Area Map



3.2 Apparatus and Equipment

3.2.1 Apparatus

MVFLS's current fleet of emergency response vehicles is well maintained but front line fire engines and tenders have an average age of 16.6 years. Engines 82, 84, and 85, have all surpassed their expected front line lifespan. Both tenders 81 and 82 are 28 years old and have also surpassed their expected lifespan as has Brush 81. Six aid units are maintained, two were placed in service in 2013 but despite these two new units the average age is 8.7 years. Four of the six aid units have surpassed their expected life span. The oldest aid unit has been in service for 18 years, more than twice the expected life expectancy.

Table 3: Fire Vehicle Inventory

Station	Engine	Aid Car	Tender	Aerial	Brush	Command	Staff Vehicles	Air Unit	Utility Trailer
Station 80	1	1				2	3	1	
Station 81	2	2	1		1	1	2		1
Station 82		1	1						
Station 83	1	1							
Station 84	1	1							
Station 85	1	1							
Total	6	7	2	0	1	3	5	1	1

3.2.2 Equipment

A full complement of special equipment is necessary for the delivery of fire and rescue services. Special equipment includes all of the equipment within fire stations or carried on fire engines and other apparatus that allow firefighters to safely and effectively deliver services. Table 4 provides a listing of the equipment maintained by MVFLS.

Table 4: Current Equipment Inventory

Existing Special Equipment Inventory	
Fire Equipment	Quantity
Fire Hose	424
Fire Hose Nozzles	63
Rescue Tools	3
Self-Contained Breathing Apparatus (SCBA)	50
IT & Office Equipment	Variable
Mobile Radios	30
Portable Radios	51
Personal Protective Gear	100
Fitness Equipment	12
Defibrillators	15
Breathing Air Compressor	1
Thermal Imaging Cameras	3
Misc. Tools & Equipment	Variable

4 Standards of Service

4.1 Time and Origin of Standards

Time to arrival at the scene of an emergency is critical in the survival of a non-breathing patient and the control of fire growth. The longer it takes for trained fire personnel to arrive at the scene of an emergency, the greater the chance for poor outcomes regarding fire and life loss³. As a result, the standards identified herein have been adopted by MVF&LS and are based upon industry best practices. These standards have been cooperatively established by the International City/County Managers Association (ICMA) National Fire Protection Association (NFPA) and the Center for Public Safety Excellence (CPSE) in the 8th edition Fire Service Self-Assessment Manual (FSSAM) published through the CPSE.

4.2 Emergency response

Achievement of drive time standards are influenced by the location of fire service resources. If a service area is located too far from a fire station (poor distribution), it is unlikely that travel time objectives will be met. If distributed resources are over used because of high demand they become “unreliable” to meet additional demand. As a result of units becoming unreliable, units from farther away must respond in the place of the already dispatched home area unit causing increases in arrival times. If too few resources exist, and fire resources from other fire departments are needed to backfill for out of service MVF&LS units, the consequence is extended drive times resulting in increased total response times.

4.3 Benchmark and Baseline Performance

MVF&LS uses the benchmark performance levels established by the CPSE as those levels of service to be achieved as capital facilities and resources are funded, deployed, and staffed. Baseline levels of service represent the minimum expected performance of the CPSE to be meaningful in reducing life and property loss. Agencies operating below baseline performance expectations usually have higher fire losses and lower levels of survival of non-breathing patients encountered during cardiac arrest. The gap between the two performance standards is anticipated to be closed as funding becomes available to implement the resources identified in the 2011 – 2030 MVF&LS Master Capital Plan and this 2014 – 2019 six year portion of that Plan.

MVFLS has established benchmark and baseline performance measures following the guidelines established by the Center for Public Safety Excellence (CPSE) published in their 8th edition of the Commission on Fire Accreditation (CFAI) Fire Service Self-Assessment Manual. Performance expectations have been established for three community risk types, urban, suburban, and rural,⁴ with both benchmark and baseline objectives. Benchmark objectives represent industry best practice and baseline objectives are minimum standards capable of limiting the loss of life and property. Agencies performing below baseline standards may be considered in response failure and not eligible for Accredited Agency Status by the CFAI. Performance below benchmark standards can contribute to unnecessary property and life loss.

³ See sections 7.4 and 7.6 of the Maple Valley Fire & Life Safety Mitigation and Level of Service Policy for additional detail and consequences of long response times.

⁴ See section 3.2.1.7 of the 2011-2030 MVFLS Capital Facilities and Equipment Plan.

4.4 Components of Response Performance

There are three components in the measurement of total fire service performance; Alarm Handling, Turnout and Drive time. Alarm handling is completed at Valley Communications Center the dispatch agency available to MVF&LS. Alarm handling is the total time elapsed from the pick-up of a 911 call until enough information is gathered to dispatch appropriate resources. Turnout refers to the total time it takes firefighters to assess dispatch information, discontinue their current task, don appropriate personal protective gear and become safely seat-belted and ready to begin their response. Turnout time ends and drive time begins when the response vehicle begins to move. Drive time ends once the response vehicle arrives at the curbside address of the dispatched incident. When added together, alarm handling plus turnout plus drive time equals total response time.

4.5 Deployment and Measures of Response Resources

Total response time is measured against two deployment practices, distribution and concentration.

4.5.1 Distribution

Distribution refers to how fire stations and resources are distributed around a service area to achieve defined response levels of service (LOS) goals for first units to arrive. Distribution is often referred to the “speed of attack.” Achievements of first unit arrival time objectives indicate that fire stations are properly distributed throughout the service area.

4.5.2 Concentration

Concentration refers to the number of resources that can be assembled or “concentrated” at the scene of an emergency. Concentration is often referred to as the “force of attack.” Concentration resources need to provide the force or quantity of resources necessary to stop the escalation of an emergency. If an agency cannot distribute and concentrate adequate resources, fire and life loss will be higher when compared to the timely arrival of adequate resources. Washington State in Chapter 52.33 RCW requires performance measures to be established and performed at 90%. If response times of 100 incidents were stacked from quickest to slowest, the time of the 90th incident is the time used to measure service delivery at 90%.

4.5.3 Distribution / First unit to arrive - Service Capabilities:

The first unit arriving at the scene of an emergency staffed with a minimum of 2 firefighters on an Aid Car, or 3 firefighters on an Engine, shall be capable of; establishing command; calling for additional resource; extending appropriate hose line(s); and/or beginning delivery of basic life support and/or rescue services. These operations are done in accordance with Department standard operating procedures while providing for the safety of the general public and responders.

4.5.4 Concentration / Full first alarm – Service Capabilities:

The full first alarm resources arriving at the scene of an emergency staffed with between 5 to 13 firefighters depending upon the incident type, shall be capable of; establishing command; providing an uninterrupted water supply, deploying hose lines for fire control and suppression; complying with the two in-two out law for firefighter rescue; completing forcible entry; controlling utilities and/or rescuing and treating sick, injured or at-risk victims. These operations are done in accordance with departmental standard operating procedures while providing for the safety of the general public and responders.

4.5.5 Benchmark and Baseline Level of Service Objectives:

Table 5 establishes the service level objectives for; Alarm Handling, Firefighter Turnout, and drive times for first units to arrive and full first alarm resource performance. Benchmark levels of service are targeted for attainment as additional resources identified in this Plan and the MCFEP are funded, implemented and staffed. Baseline performance objectives are the minimum levels of service MVFLS is currently capable of achieving.

Table 5: Benchmark & Baseline Level of Service Objectives

Benchmark and Baseline Performance Objectives				
Performance Type	Urban	Suburban	Rural	Performance Factor
Alarm Handling - Benchmark	1:10	1:10	1:10	90% of the time
Alarm Handling - Baseline	1:30	1:30	1:30	90% of the time
Turnout - Benchmark	2:00	2:00	2:00	90% of the time
Turnout - Baseline	2:30	2:30	2:30	90% of the time
Drive Time - First Unit to arrive - Benchmark	4:00	5:00	8:00	90% of the time
Drive Time - First Unit to arrive - Baseline	5:12	6:30	10:00	90% of the time
Drive Time - Full First Alarm - Benchmark	8:00	10:00	14:00	90% of the time
Drive Time - Full First Alarm - Baseline	10:24	13:00	18:12	90% of the time
Total Response Time, "First Unit" - Benchmark	7:10	8:10	13:10	90% of the time
Total Response Time, "First Unit" - Baseline	9:12	10:30	17:00	90% of the time
Total Response Time, Full First Alarm - Benchmark	11:10	13:10	17:10	90% of the time
Total Response Time, Full First Alarm - Baseline	14:24	17:00	22:12	90% of the time

4.5.6 Resource Capacity

Finally, resource capacity is evaluated. The fire service refers to this measure as unit “reliability” which refers to the availability of response units. If an emergency response unit was in its assigned location 24 hours a day and never left, it would have a reliability of 100%. But if an emergency response unit is expected to provide a level of service performance at 90% or 9 times out of every ten requests, that unit must be available or “reliable” for providing service when called upon at least 90% of the time or it will fail in its performance expectation. Unit reliability is often the best predictor of service capacity of deployed units. As workload increases, reliability decreases.

Table 6: Response Unit Reliability Objectives

Minimum RELIABILITY Objectives			
Performance Type	Urban	Suburban	Rural
Minimum Peak Hour Unit Reliability	90%	90%	90%

5 MVF&LS Service Level Performance

5.1 Response Performance Findings

Analysis of MVFLS’s historical response data reveals sub-standard performance compared to both benchmark and baseline expectations. Several factors contribute to this current sub-standard performance. First, performance cannot be met during peak hours where unit reliability is below the

expected performance standard of 90%. Second, some areas of MVFLS simply cannot be reached within the adopted time standards because of the excess distance from a fire station and finally, some stations are within timely reach of substandard service areas but the lack of full time staffing at these stations impacts their unit reliability. Emergency response rates for the preceding three (3) years are identified in Table 7 Drive Time Performance of First Units to Arrive or “Distribution”. Historical performance is identified in a stop-light, (green, yellow, red) approach. Green indicates the standard was met, yellow indicates performance was within 10 seconds of the standard and red indicates performance was more than 10 seconds off of the standard. Data for this analysis was obtained from emergency response records of MVFLS.

5.1.1 Distribution / First Unit to Arrive Performance

Distribution performance or drive times for first unit arrival are displayed below in Table 7 Drive Time Performance of First Units to Arrive or “Distribution”. The actual drive time for first arriving units is compared to both benchmark and baseline standards. The overall trend of the data collected between 2007 and 2009 compared to the data collected from 2010 to 2013 shows increasing drive times of units deployed from Stations 81, 82, 83 and 85. This is likely due to increased traffic congestion and decreasing unit reliability as a result of increasing service demand.

Table 7 Drive Time Performance of First Units to Arrive or “Distribution”

Performance Comparison – Benchmark Verses Baseline									
Performance at BENCHMARK Drive Time Standard					Performance at BASELINE Drive Time				
Station	Year of Measure	Urban	Suburban	Rural	Actual Time	Urban	Suburban	Rural	Actual Time
80	2007 - 2009	4:00	5:00	8:00	5:15	5:12	6:30	10:00	5:15
80	2010 - 2013	4:00	5:00	8:00	5:07	5:12	6:30	10:00	5:07
81	2007 - 2009	4:00	5:00	8:00	5:35	5:12	6:30	10:00	5:35
81	2010 - 2013	4:00	5:00	8:00	6:40	5:12	6:30	10:00	6:40
82	2007 - 2009	N/A	N/A	8:00	8:04	N/A	N/A	10:00	8:04
82	2010 - 2013	N/A	N/A	8:00	8:23	N/A	N/A	10:00	8:23
83	2007 - 2009	4:00	5:00	N/A	6:05	5:12	N/A	N/A	6:05
83	2010 - 2013	4:00	5:00	N/A	6:06	5:12	N/A	N/A	6:06
84	2007 - 2009	N/A	5:00	8:00	10:01	N/A	6:30	10:00	10:01
84	2010 - 2013	N/A	5:00	8:00	10:03	N/A	6:30	10:00	10:03
85	2007 - 2009	N/A	5:00	8:00	9:41	N/A	6:30	10:00	9:41
85	2010 - 2013	N/A	5:00	8:00	9:25	N/A	6:30	10:00	9:25

5.1.2 Concentration / Full First Alarm Performance

MVF&LS has generally relied upon mutual aid resources to fill full first alarm resource assignments for structure fires. 94% of all incidents between 2010 and 2013 required mutual aid resource to deliver full first alarm resources needed for those incidents. Reliance on mutual aid occurs when too few resources exist within a service area to fulfill the full first alarm resource requirements. Because MVF&LS cannot predict availability of, or plan for long term resources of other agencies, it is difficult to present reliable data on the performance of full first alarm units. For planning purposes, MVF&LS can only assemble full first alarm resources reliably for incidents requiring fewer than 10 personnel and cannot achieve benchmark or baseline performance with current resources.

5.1.3 Reliability Performance

Impacts of growth have eroded service levels and reliability since data was collected in 2009. Response resources within the City of Maple Valley have been affected most with Stations 80, 81, and 83 losing the most capacity. It should be noted that the City of Maple Valley is often without fire protection from these three stations during peak demand hours. Service during these times is provided by automatic mutual aid from resources much farther away resulting in increased response times. This trend will continue until additional resources can be deployed.

Table 8 Unit Reliability

Time committed to responses by unit 2007 – 2009 (based on 24 hour day) Compared to 2013					
Unit	Out of Service Minutes per Year	Unit Reliability 2007 - 2009	Unit Reliability 2013	Response Condition 2007 - 2009	Response Condition 2013
A80	35,943	93.16%	93.86%	Yellow	Yellow
A81	55,315	89.48%	89.71%	Red	Red
A84	3,059	99.42%	96.38%	Green	Green
A85	932	99.82%	97.42%	Green	Green
B81	9,381	98.22%	98.27%	Green	Green
E80	12,122	97.69%	93.76%	Green	Yellow
E81	17,622	96.65%	93.86%	Green	Yellow
E82	461	99.91%	Out of Service	Green	Red
E83	19,386	96.31%	94.32%	Green	Yellow
E84	2,210	99.58%	98.05%	Green	Green
E85	2,146	99.59%	91.19%	Green	Yellow

6 Conclusion of Need for Capital Resources 2014 – 2019

Growth within Maple Valley is expected to continue at or close to the rates experienced between 2009 and 2013 resulting in continued erosion of unit reliability leading to the erosion of service capacity which in turn, will lead to steady increasing of total response times unless additional resources can be funded and deployed. Resources necessary to maintain levels of service concurrently with growth within MVF&LS over the next 20 years have been identified in the adopted 2011 – 2030 Capital Facilities & Equipment Plan. Multiple factors⁵ were considered in arriving at the resources needed to maintain fire service concurrency through 2030. The following resources have been identified to be funded and deployed over the next 6 years to continue progress toward full implementation of the 2011-2030 Capital Facilities and Equipment Plan.

6.1 Planned Capital Purchases 2011 – 2030

The 2011 – 2030 MVF&LS Capital Facilities and Equipment Master Plan identified the need for more than \$38 million in capital investments to maintain fire service concurrency through 2030. This

⁵ See Section 3.4.1 of the 2011 – 2030 Capital Facilities & Equipment Plan

6 year plan when completed will achieve approximately 55% of the needed capital investments by the end of 2019. 2020 will mark the halfway point in the 20 year plan.

6.1.1 Progress toward Planned Capital Purchases

As a result of the Great Recession and the uncertainty of the economy, MVFLS delayed planned capital purchases between 2011 and 2013. Instead of spending the planned \$2.35 million that was identified, total expenditures during that time were restricted to \$408,000 for two new Aid Cars. Developer impact fees funded two thirds of the purchase with Bond funds making up the balance. As a result of this cautious approach, the overall schedule for capital purchases has fallen slightly behind the original schedule.

6.1.2 Planned Capital Purchases 2014 – 2019

The projects included to be funded between 2014 and 2019 include: Construction of a new Station 80 to consolidate existing stations 80 and 83 southward to a new location within the main area of future growth of Maple Valley known as Summit Place. Asset preservation projects include a new roof, new heating ventilation and air conditioning systems and seismic upgrades to preserve the capacity of Station 81 and minimize the risk of earthquake. Various equipment and apparatus purchases are also expected over the next 6 years. The single largest apparatus cost will be a new aerial ladder truck that is necessary to protect the larger commercial and multifamily structures currently in and expected to be built within the City of Maple Valley. Expected capital expenditures are summarized below in Table 9: Six Year (2014-2019) Capital Costing.

Table 9: Six Year (2014-2019) Capital Costing

Six (6) Year Capital Needs							
All Costs in thousands based on 2014 dollars							
Year	2014	2015	2016	2017	2018	2019	6 Year Total
Station Construction	\$0	\$0	\$0	\$0	\$2,613	\$7,838	\$10,451
Apparatus	\$1,311	\$0	\$60	\$0	\$1,083	\$0	\$2,454
Equipment	\$105	\$179	\$246	\$210	\$430	\$227	\$1,397
Asset Preservation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total in Thousands	\$1,416	\$179	\$306	\$210	\$4,126	\$8,065	\$14,302

7 Funding Plan for 2014 – 2019 Planned Capital Purchases

The planned purchases shown in Table 9 will be funded through a variety of methods including annual tax levies, impact fees, and voter approved bond funds. The 6 year funding plan is largely dependent upon voter approved bond funds utilizing bonds from a 2004 bond measure as well as a new bond measure to be placed before voters in 2017. The breakdown between expenses and revenue sources to implement this Plan is found in Table 11. Bond funding makes up approximately 82% of the needed funding followed by taxes at 10%, developer impact fees at 5% and 2% from the sale of MVFLS assets. More than 90% of capital funding will be provided by MVF&LS tax payers through annual tax levies and bond payments.

7.1 Impact Fee Basis

Impact fees are established in the MVF&LS Mitigation and Level of Service Policy in Appendix A, through a formula that looks at service demand by property type. Annually, as capital needs and costs are reviewed, Appendix A of the Mitigation Policy will be adjusted to arrive at current impact fee amounts. The current impact fees per property type are displayed below in Table 10: 2014 Impact Fees. The fees displayed are maximum fees without service capacity adjustments. It is rare that new construction will pay the maximum fee. System Wide C&E represents the cost of capital construction and equipment necessary through 2030 to maintain fire service concurrency with new development. See Appendix A of the MVFLS Mitigation and Level of Service Policy for the policy that outlines fire service capacity adjustments to the base or maximum fee displayed below.

Table 10: 2014 Impact Fees

Level Of Service Formula Calculation							
Land Use Type	System wide C&E	Res/Co m Split	Usage Factor	ERF Factor	New Dev Share	Projected New Units 2011 - 2030	Impact & LOS Contribution Fee Amount
Residential							
Single Family	\$32,628,000	74%	80%	1	18%	2,108 living units	\$1,649.35 per house
Multi Family	\$32,628,000	74%	20%	1.3	40%	2,108 living units	\$1,191.20 per unit
Commercial							
COMM/IND	\$32,628,000	26%	70%	2	30%	2,000,000 sq ft	\$1.7815 per sq ft
HOSP/MED/CIV/SCH/CHUR	\$32,628,000	26%	20%	2	40%	2,000,000 sq ft	\$0.6787 per sq ft
ASSISTED CARE	\$32,628,000	26%	10%	3	50%	2,000,000 sq ft	\$0.6362 per sq ft

Table 11: 6 Year Funding Model

6 Year Cost/Funding Sources for Capital Needs							
Costs based on 2014 (thousands) dollars							
Cost/Funding Source	2014	2015	2016	2017	2018	2019	6 Year Total
Cost of Capital Needs							
Station Construction & Land Purchase	\$0	\$0	\$0	\$0	\$2,613	\$7,838	\$10,451
Apparatus	\$1,311	\$0	\$60		\$1,083	\$0	\$2,454
Equipment	\$105	\$179	\$246	\$210	\$430	\$227	\$1,397
Asset Preservation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Debt Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sources of Funding for Capital Needs							
Annual Reserve Funds	\$250	\$40	\$175	\$85	\$850	\$100	\$1,500
Bond Funds	\$1,116	\$65	\$31	\$0	\$3,100	\$7,315	\$11,627
Sale of Surplus Property	\$0	\$0	\$0	\$0	\$0	\$475	\$475
Impact/LOS Fees	\$50	\$74	\$100	\$125	\$176	\$175	\$700
Summary							
Cost	\$1,416	\$179	\$306	\$210	\$4,126	\$8,065	\$14,302
Funding	\$1,416	\$179	\$306	\$210	\$4,126	\$8,065	\$14,302
Balance	\$0	\$0	\$0	\$0	\$0	\$0	\$0

8 Appendices

8.1 Appendix A: Special Equipment Purchases 2014 -2019

Special Equipment Purchases 2014 - 2019							
Fire Equipment	2014	2015	2016	2017	2018	2019	6 Yr Total
Fire Hose	\$0	\$0	\$160,632	\$0	\$0	\$0	\$160,632
Fire Hose Nozzles	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Rescue Tools	\$0	\$0	\$0	\$0	\$101,529	\$0	\$101,529
SCBA	\$0	\$0	\$0	\$0	\$172,464	\$0	\$172,464
IT & Office Equipment	\$76,044	\$76,044	\$76,044	\$76,044	\$76,044	\$76,044	\$456,263
Mobile Radios	\$0	\$0	\$0	\$3,285	\$0	\$0	\$3,285
Portable Radios	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bunker Gear	\$0	\$68,212	\$0	\$130,461	\$0	\$0	\$198,674
Fitness Equipment	\$0	\$35,197	\$0	\$0	\$0	\$0	\$35,197
Defibrillators	\$0	\$0	\$0	\$0	\$0	\$70,009	\$70,009
Air Compressors	\$0	\$0	\$0	\$0	\$70,393	\$0	\$70,393
Thermal Imaging Cameras	\$0	\$0	\$0	\$0	\$0	\$61,050	\$61,050
Misc. Tools & Equipemen	\$28,764	\$0	\$8,970	\$0	\$9,152	\$19,986	\$66,872
	\$104,807	\$179,453	\$245,646	\$209,790	\$429,582	\$227,088	\$1,396,367

8.2 Appendix C: Station Construction Projects

2014 - 2019 Fire Station Land & Construction Costs				
2014 - Thousands of Dollars				
Year of Expense	Station 80	Station 82	Station 85	Yealy totals
2014	\$0	\$0	\$0	\$0
2015	\$0	\$0	\$0	\$0
2016	\$0	\$0	\$0	\$0
2017	\$0	\$0	\$0	\$0
2018	\$2,613	\$0	\$0	\$2,613
2019	\$7,838	\$0	\$0	\$7,838
Grand Totals	\$10,451	\$0	\$0	\$10,451

8.3 Appendix D: Apparatus Replacement Schedule

Apparatus Replacement Schedule in 2014 Dollars							
Year	Fire Engine	Aid Car	Command	Tender	Ladder Truck	Maintenance	Projected Cost for Year
2014	2	1					\$975
2015							\$0
2016			1				\$60,000
2017							\$0
2018					1		\$1,082,650
2019							
Total 6 year apparatus costs							\$1,143,625